MARCH 1959

Brick & Clay Record

LEADING CLAY JOURNAL OF THE WORLD

BRICK • REFRACTORIES • STRUCTURAL TILE • SEWER PIPE • DRAIN TILE • TERRA COTTA • ROOFING TILE • CLAY AGGREGATE

FOR MODERN AUTOCLAYMATION

BONNOT *Clay Working* MACHINERY

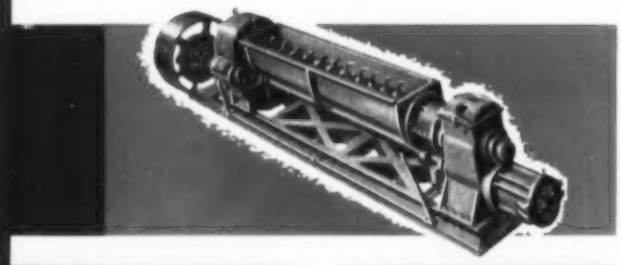
. . . *insures*

★ **HIGHEST QUALITY PRODUCTS**

★ **GREATEST COST CONTROL**

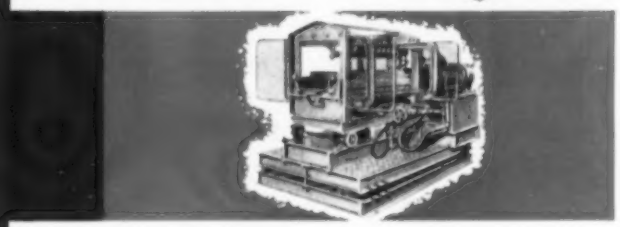
★ **SIMPLIFIED MAINTENANCE**

"Integrity of performance" is built around "3 fundamentals which 75 years of experience prove are necessary for profitable clay processing." Continuous achievement of these fundamentals at Bonnot, is based on:



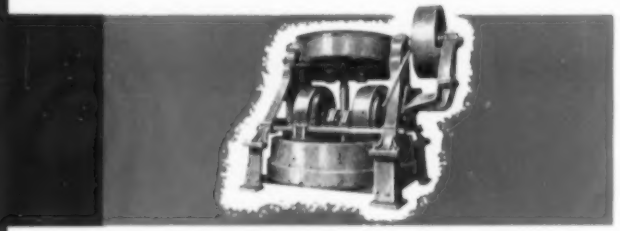
Experienced Engineering . . .

that begins with a positive analysis of your local conditions and needs by experienced Bonnot engineers. Your manufacturing—which differs from other plants in product and raw material—requires detailed study to insure equipment that unfailingly delivers to you—**highest quality for highest profit . . . greatest cost control . . . minimum maintenance.**



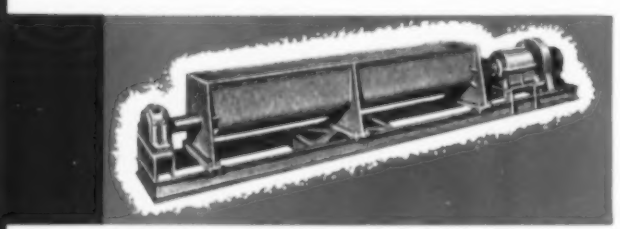
Superior Manufacturing . . .

that assures you year after year of uninterrupted production. Bonnot equipment is engineered for long wear . . . designed for simplification of maintenance with the advantage of interchangeable components. Quality wearing parts are produced in Bonnot's own foundry with NiHard and other iron alloys. When an emergency arises, you get the services of clay processing specialists.



Advanced Research . . .

in our lab and your plant—has perfected many "clay industry firsts" including production de-airing, frictionless bearings, front end absorption of thrust loads, off-center disc feeders, completely adjustable hydraulic cutters. These and other cost-saving advancements enable you to maintain delivery schedules and reasonable profit returns.



SEND US YOUR SPECIFIC REQUIREMENTS . . .

we'll do the rest . . . **PROMPTLY!**

BONNOT'S "Pre-engineered line" already includes

AUGER MACHINES
BALL MILLS
BRICK CUTTERS
BRICK SCRATCHERS
CLAY BLENDERS
CLAY FEEDERS
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CLAY MIXERS
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CRUSHERS
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DE-AIRING, POTTERY
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DE-AIRING, REFRACTORIES
DE-AIRING, PIPE PRESS
DIES
DRY PANS
FEEDERS, DRY
FEEDERS, WET
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MIXERS, DRY OR WET
PUG MILLS, HEAVY
PUG MILLS, POTTERS
PULVERIZERS
REPRESSES
ROTARY DRYERS
TILE CUTTERS
TUBE MILLS
WET PANS

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The BONNOT Co.

CANTON 2, OHIO

VITRO CADMIUM SELENIUM COLORS

for structural clay products, enamels, glass and whitewares!

There's no doubt about it—these Vitro Colors are in a class by themselves. They offer unusually high chroma, are very stable at low temperatures, and will fire out clean to provide high color values free of undesirable black spots. Because of their extra strength, they give more coverage per pound —materially reduce production costs.

Vitro Cadmium Selenium Colors are available in many shades from lemon yellows through oranges to brilliant reds. Also, they can be used to produce a very nice maroon, and at reduced percentages give beautiful pastels.

If you have any doubts about the superiority of these Colors by Vitro, ask anyone who has ever used them. Or, write today for samples to test in your own plant.

Vitro Colors are made by Vitro Manufacturing Company and sold by Berkshire Chemicals, Inc.—both component companies of Vitro Corporation of America.

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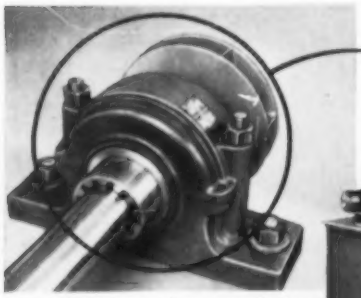
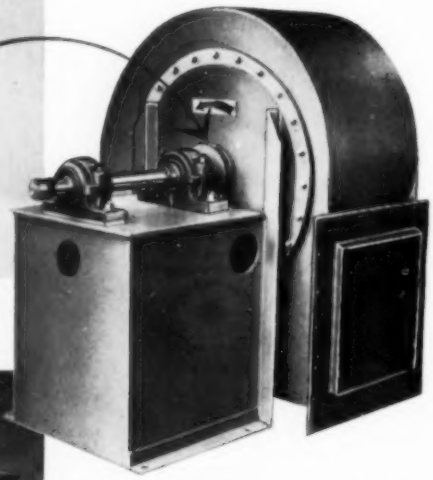
Colors by Vitro

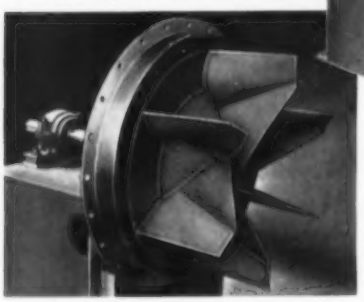
DE-AIRING, REFRACTORIES WET PANS

3 *outstanding features make this*
ROBINSON EXHAUSTER
BEST for recirculating hot air in kilns—up to 1650°F.

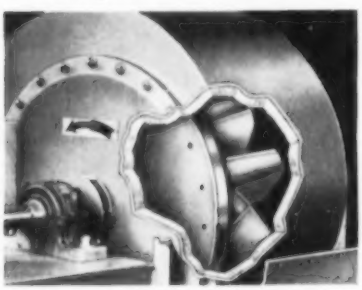


1 Splined brass sleeve extends between bearing and shaft. Wheel mounted on shaft beyond bearing induces air through splines to provide integral, trouble-free cooling.





2 Cartridge type wheel assembly is removed from the drive side of the exhauster. Inspection and maintenance of both wheel and exhauster is simplified and speeded, without entering kiln.



3 Steel outer skin and alloy inner casing are separated by high-temperature insulating material, minimizing heat loss in kiln air, and reducing heat radiation and conduction to other parts.

Three unusual features—exclusive integral self-cooling, cartridge-type wheel assembly, and carefully engineered use of insulation and alloys—help Robinson High-Temperature Exhausters give unsurpassed efficiencies in recirculating hot air in kilns. These important features are the results of Robinson's long experience in improving air handling procedures in the ceramic industry's high temperature operations.

Because a successful kiln or dryer design depends heavily on proper air handling, Robinson engineers will work in a consulting capacity with your designers and builders. It is added assurance that you will get the most economical and efficient firing and drying facilities.

If you are building new facilities, or refurbishing existing ones, specify Robinson—for superior air handling matched to proper kiln and dryer design.
Write today for literature.

INDUSTRIAL FANS · BLOWERS · EXHAUSTERS
ROBINSON VENTILATING CO.
119 HENDERSON STREET, ZELIENOPLE, PA.

LETTERS To the Editor

CFLI Comments

Editor, *Brick & Clay Record*—We here in Natco were delighted to read your editorial in the current Brick & Clay Record. I am sure all members of the Clay Flue Lining Institute feel the same way, and are grateful for your support.

Harry F. Toner
General Mgr., Sales
Natco Corp.
Pittsburgh

Editor, *Brick & Clay Record*—Have just received the latest (Feb.) issue of Brick & Clay Record and you may be sure that I have read with great interest the editorial, "All For One."

It is very well written and you can be assured of the very great appreciation of each member of the CFLI.

We are growing. Note from this letterhead we now have fourteen manufacturers and we feel sure that we shall continue to grow. News such as contained in this editorial will certainly help tremendously. Many thanks for this boost.

C. L. Meanor, Pres.
Clay Flue Lining Inst.
Akron, Ohio.

Correction

Editor, *Brick & Clay Record*—Please accept my sincere congratulations on your Annual Refractories section. It is a job which has been very well done. A thorn, however, to your proofreaders—Pittsburg, Calif., where we have a plant should be spelled without the final "h", and the Vice President, General Manager of our Refractories Div. is W. F. Godejohn, no Gohejon.

Carlton P. Adams
Mgr., Adv. & PR
Gladding, McBean & Co.
Los Angeles, Calif.

Cover Picture

This unusual shot is of a new Sanford-Day unit with an unusual name: the Gismo Transloader, a self-loading transport, powered by crawler tractor.

Brick & Clay Record

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New grinding equipment, revamped pit and storage boost output, product quality in this drain tile operation.

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Minnesota plant, only a year old, has third rotary ready to be put in, will add a fourth as market situation demands.

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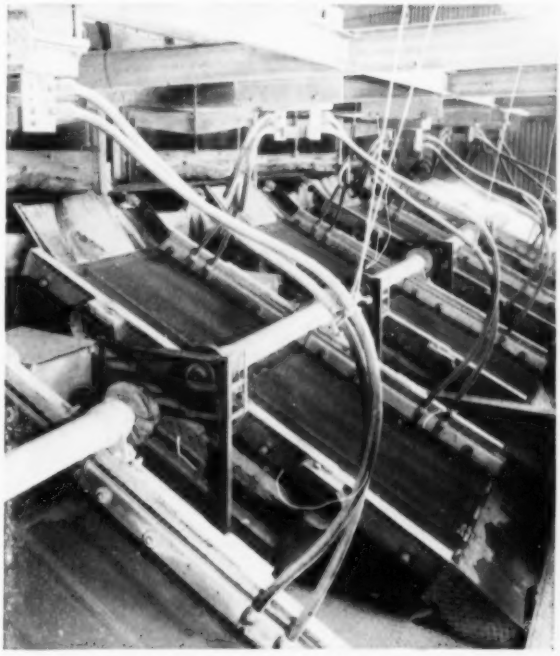
How to keep a

clean screen

when sizing sticky materials



LINK-BELT ALONE heats screens with a "series" arrangement requiring fewer cables, lower initial cost . . . providing less power loss, more even heating. Above, each of five "UP" screen cloths is connected to 12-kva transformer.

Electrically-heated cloth enables LINK-BELT "UP" vibrating screen to deliver its full capacity

HERE'S a screen delivering high-velocity action that's unsurpassed for fast, accurate sizing. And to guard that efficiency against blinding by sticky or hygroscopic fines, Link-Belt offers a superior electric screen-heating arrangement. Among its advantages:

GREATER OUTPUT. Open mesh may boost capacity as much as 50%. Downtime for cloth cleaning and replacement is eliminated.

BETTER, MORE UNIFORM PRODUCT. Clear cloth provides more accurate sizing.

LONGER CLOTH LIFE. No whipping due to material accumulation.

LABOR SAVINGS. Ends mechanical cleaning.

Write your Link-Belt office for Book 2777 containing full data on "UP" screens.

LINK-BELT

VIBRATING SCREENS

LINK-BELT COMPANY: Executive Offices, Prudential Plaza, Chicago 1. To Serve Industry There Are Link-Belt Plants and Sales Offices in All Principal Cities. Export Office, New York 7; Canada, Scarboro (Toronto 15); Australia, Marrickville (Sydney), N.S.W.; South Africa, Springs. Representatives Throughout the World. 14,525

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WHY DID PAYNE CHOOSE VARCO?

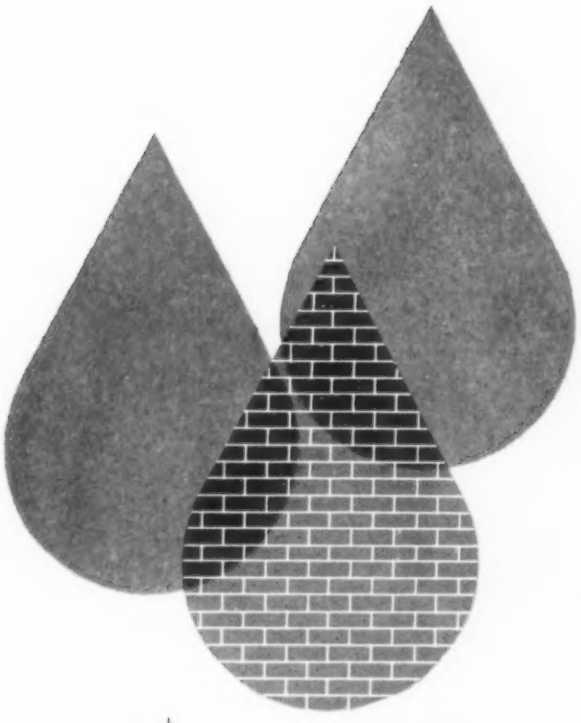
Varco Clay Storage Building
at Payne Brick Company,
Elgin, Texas

"Varco had the building that could give us clay storage at low cost, and they could erect it fast," stated O. L. Payne, president of Payne Brick Company. "It was just good business to go with Varco, and we're glad we did."

Give your plant protection against wet-clay down time with a low-cost Varco clay storage building. These sturdy, maintenance-free structures have been proven throughout the brick and clay industry and they can be erected on your foundation at exceedingly economical cost. Available in 60, 80, or 100-foot clear spans, the Varco building is designed to handle any type conveyor system up to a 24-inch belt, and can be covered with aluminum or galvanized siding.

Varco
STEEL BUILDINGS

R. G. VARNER STEEL PRODUCTS, INC. P. O. BOX 781 • PINE BLUFF, ARKANSAS



For even temper... better textures add **Additive-A*** clay conditioner

ADDITIVE-A

Right at the start . . . at the pug mill . . . you can assure better brick production by adding Additive-A, a product of Kimberly-Clark Corporation. For here is where this hard-working clay conditioner helps most to produce more even temper, to smooth out your production rate and to reduce variation in textures.

Extra benefits of Additive-A are:

- Increases green plastic strength
- Improves clay workability
- Upgrades the quality of all ware
- Aids water penetration
- Increases dry green strength
- Cuts dryer loss
- Controls scumming

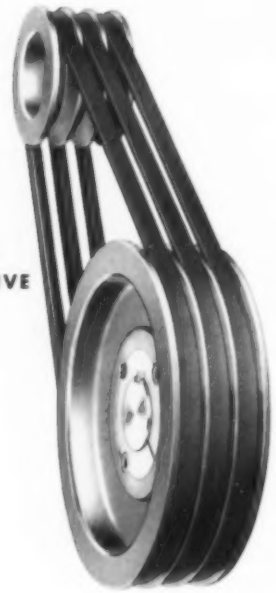
ADDITIVE-A is a trademark of KIMBERLY-CLARK CORP. registered and patents pending.

Write for descriptive folder, to: **Kimberly-Clark Corporation** • **NEENAH, WISCONSIN**
CHEMICAL PRODUCTS

Announcing

an entirely new line of V-Belt Drives.....

DODGE Dyna V



CONVENTIONAL TAPER-LOCK DRIVE

DYNA-V TAPER-LOCK DRIVE

NEW ***HIGH CAPACITY***

NEW ***COMPACTNESS***

NEW ***SAVINGS IN COST***

COMPARISON, ILLUSTRATED ABOVE — 3 HP, 1750 RPM, 2.41 TO 1 RATIO

	BELTS		SHEAVES			CENTER DIS-TANCE	HP	WEIGHT (LBS.)	COST	
	Number	Size	O.D. Driver	O.D. Driven	Width				Per hp	Per Drive
CONVENTIONAL TAPER-LOCK DRIVE	3	A42S	4.15″	8.95″	2½″	12.3″	4.62	24.7	$5.91	$27.38
DYNA-V TAPER-LOCK DRIVE	2	3V400	3.35″	8.00″	1½″	10.8″	5.0	18.0	$4.50	$22.50
% SAVING *Savings vary with different sized drives*			**19%**	**10%**	**56%**	**12%**	+	**27%**	**23.8%**	**17.8%**

Dyna-V Drives are sensationally compact. They are capable of handling up to three times as much horsepower in a given space. Dyna-V opens vast new possibilities for better, more economical machine design. And, in most instances, *Dyna-V costs less!*

Narrower grooves, to match stronger, narrower Dyna-V Belts, greatly reduce the face width and the weight of Dyna-V Sheaves. Cost is lowered. Smaller diameter sheaves and shorter center distances multiply savings.

Dyna-V Sheaves decrease shaft overhang—increase bearing life. The new dimensional stability of Dyna-V Belts solves the problem of belt matching. Every belt carries its full share of the load.

Dyna-V Drives are available for capacities from 1 to 1500 hp. Ask your Dodge Distributor. Or write us for new Dyna-V Bulletin.

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DODGE

of Mishawaka, Ind.

CALL THE TRANSMISSIONEER—your local Dodge Distributor. Factory trained by Dodge, he can give you valuable help on new, cost-saving methods. Look in the *white* pages of your telephone directory for "Dodge Transmissioneer."

UNIFORMITY

Ultrox...

Zirconium Opacifiers

FOR ALL CERAMIC GLAZES

■ From mine to kiln, batch to batch, the big word behind Ultrox Zirconium Opacifiers is uniformity. Assuring Ultrox uniformity are control tests far more demanding than actual conditions of use. Here's how M&T spells uniformity . . . . in every bag, every drum of Ultrox or Ultrox 500W:

- **Selected ores are continually analyzed both at the mine and at M&T processing plants to set the course for highest quality.**
- **Processing equipment is automated to safeguard against human error.**
- **Constant checking controls chemical analysis and assures uniform particle size.**
- **Fired glaze tests are made to appraise color and opacity —before any lot is approved for shipment.**

Write for useful literature or an assist in solving your brick or other ceramic glaze problem.

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Zircon, Milled Rutile, Milled

ENAMEL OPACIFIERS
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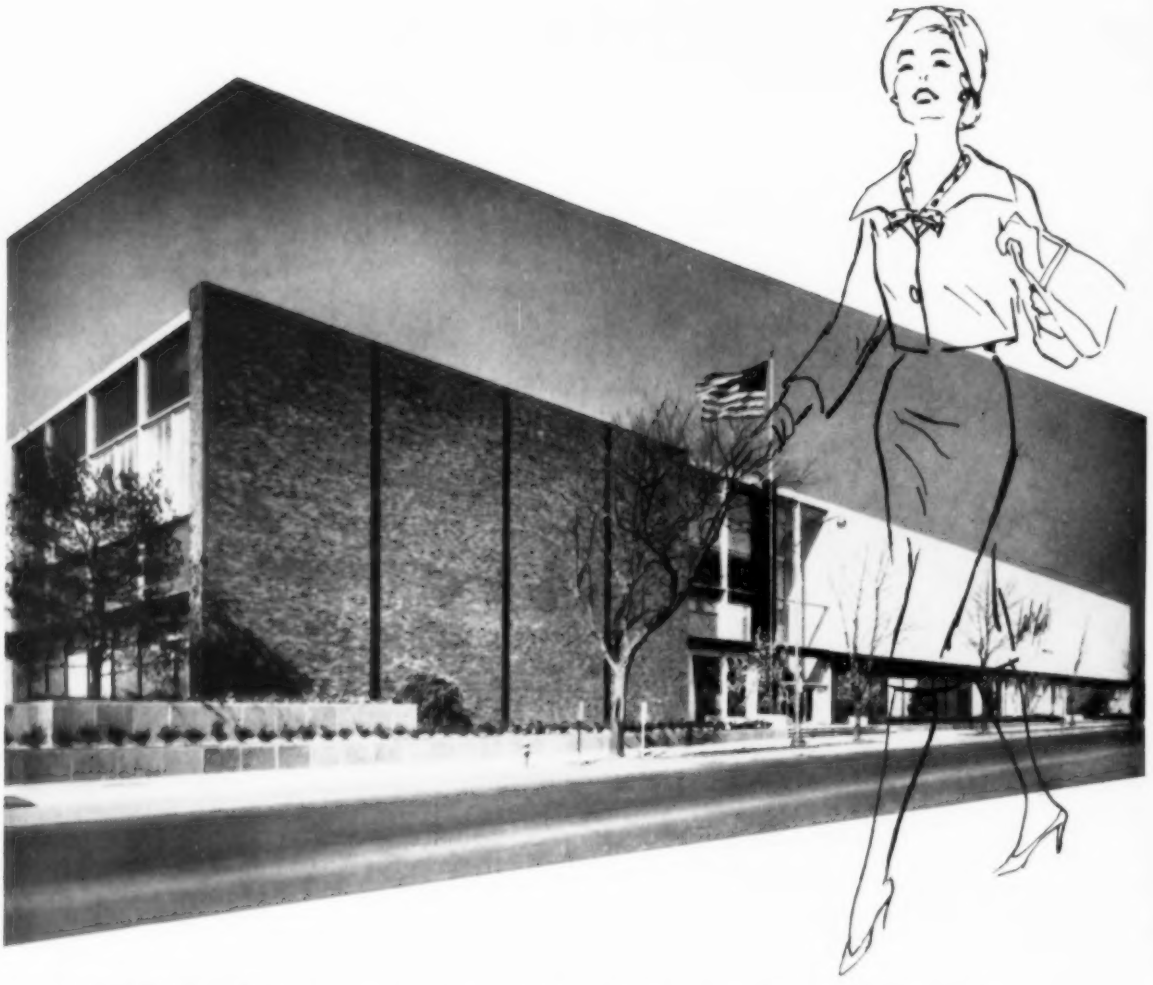
Zirconium Silicate

ADDITIVES FOR BARIUM TITANATE DIELECTRICS
Crystalline Stannates of Bismuth, Lead, Calcium, Magnesium and others

CERAMIC CHEMICALS



LEAD'S IN STYLE AT LORD & TAYLOR

Lord & Taylor's new branch store reflects in architecture the same contemporary beauty that the company signifies in the world of fashion. Its striking facade is of ceramic-glazed brick in several different shades of red.

The designer, William T. Snaith, President of the Raymond Loewy Corporation, explains the choice of materials: "I wanted rough textures opposing highly-glistening surfaces; I wanted a certain texture in the color as well. Lead-base ceramic glazed brick gave me the polished surface and, by mixing five different reds, I got the desired color effect."

Lead glazes put the gleam on a wide variety of ceramics. Nothing else works so well and lasts so long. Versatile lead compounds help the glazes flow freely and form a smooth, brilliant coating. Lead glazes melt quickly at relatively low temperatures, save furnace time and fuel. And only lead glazes offer a wide softening range under varying kiln temperatures, keep scrap rate low.

Why not look into the profitable advantages of lead compounds in your plant. We'll be happy to send you a copy of our illustrated booklet, "Lead In The Ceramics Industries." Send for it today.

look ahead with LEAD

Lead Industries Association

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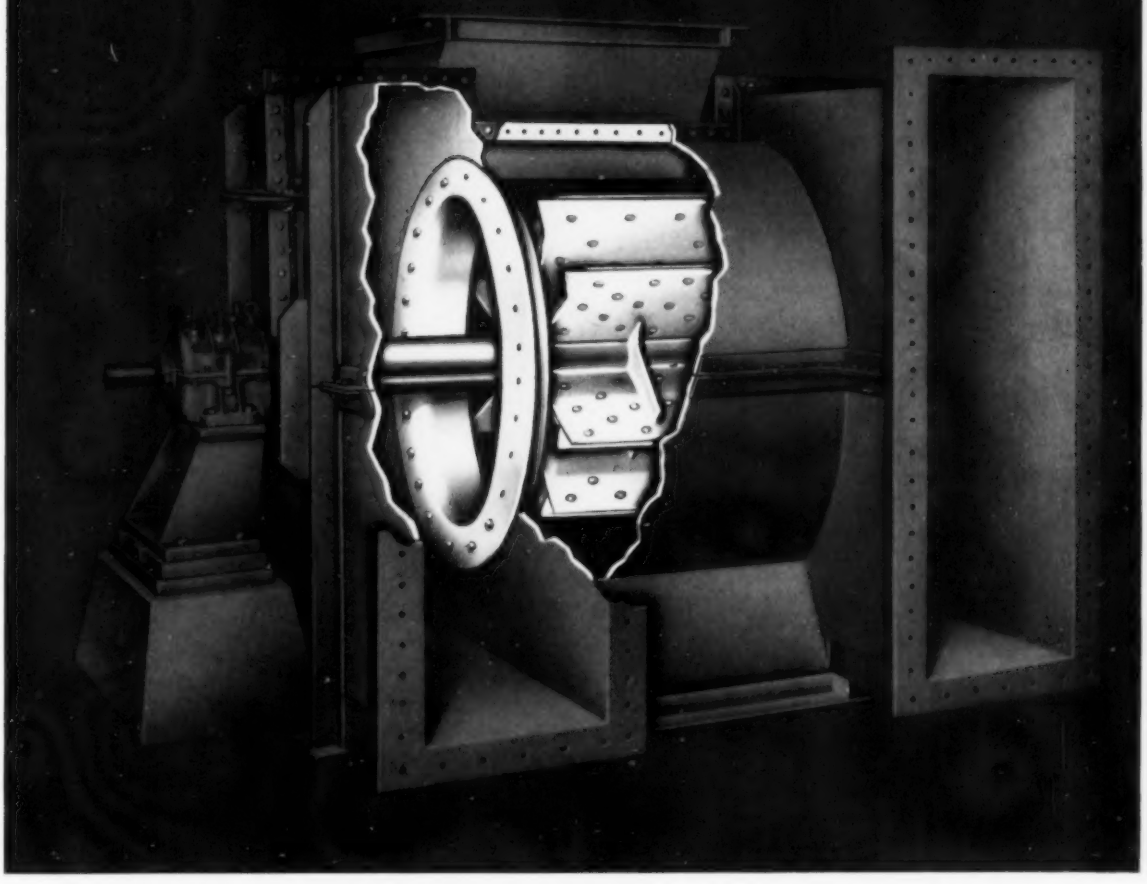
When you need

a tough fan for . . .

sintering • ore beneficiation • rotary kilns



Use Westinghouse erosion-resisting fans:

Designed specifically to handle abrasive gases at elevated temperatures and high pressures!

Superior Wheel Design:

Open wheel (no side plates) with radial tapered blades provides low stress and long rotor life.

Erosion Resistance:

- Ribbed blade liners for severe abrasive service.
- Flat blade liners to prevent material build-up.
- Flat housing and scroll liners.

All liners easily replaceable in the field.

More Information?

Call your nearest Sturtevant Division Sales Engineer, or write Westinghouse Electric Corporation, Department C-7, Hyde Park, Boston 36, Mass.

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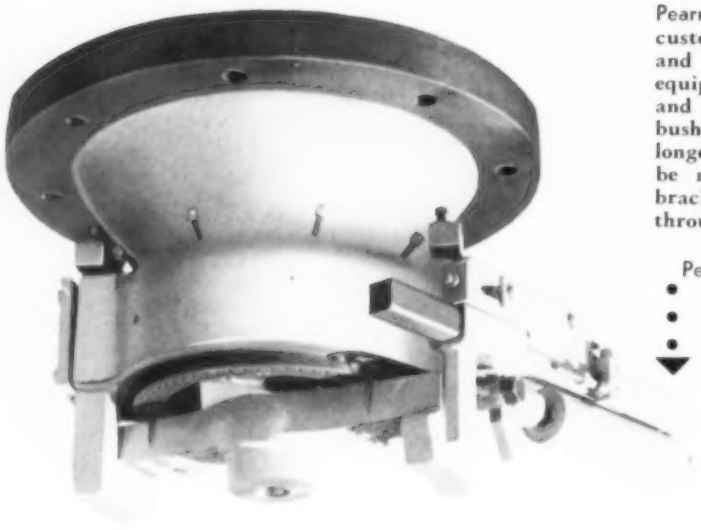
YOU CAN BE SURE...IF IT'S Westinghouse

PEARNE AND LACY

SEWER PIPE DIES-LOCKERS AND OILERS



Pearne and Lacy Sewer Pipe Dies are made to customers' specifications as to size and shape and are of high grade cast iron. Dies come equipped with standard or roller type hooks and steel former arms. Die body and cores are bushed with replaceable bushings to insure longer life. The socket portion of the die can be made replaceable if desired. Die locker brackets are included. Die sizes range from 4" through 42".

Pearne and Lacy Die Lockers are self contained units specially designed for high speed locking and un-locking. Available for either hydraulic or air operation. Easily replaced with die changes.

Pearne and Lacy Automatic Die Oiler is specifically designed for die and former oiling on sewer pipe presses. This is a small compact unit ready for immediate use. Once installed, your die oiling problems are over. The oil is ejected under high pressure through a special nozzle. At no time is air mixed with the oil, consequently no oil fog is present. There is an adjustable volume control for the exact amount of oil needed. It is automatic and includes provisions for manual control.

Write for complete details covering specific requirements.

Engineers and Manufacturers of automatic handling and finishing equipment for the Ceramic industry.

Pearne and Lacy Machine Company

P. O. Box 366, Terminal Annex Los Angeles 54, California

PEARNE AND LACY INC. MACHINE COMPANY

If you make BRICK . . .
we can show you how to COLOR it

Until recently, brick coloring was largely confined to the use of colored glazes, yet relatively few manufacturers could fit glazing into their brick-making processes. As demand increased for more and more color on brick, we developed coloring methods which all face brick manufacturers can use. Colored engobes and colored sands are a direct result of our research, so Drakenfeld can now offer a coloring material to suit almost any brick processing setup.

Whatever your plans for producing colored brick, an experienced team of Drakenfeld color ceramists will gladly assist you with prompt, dependable solutions to your coloring problems. We cordially invite your inquiry.

SAND COLORS: If you use a sand mold, sand blast, or any kind of sand finishing operation, Drakenfeld has a complete palette of colors for you. They are colors you merely mix with your sand and apply by your normal sand coating technique. No change in processing—no special processing required. The cost is low.

ENGOBE STAINS: Engobes can provide a permanent colored surface for your brick at low cost. Engobe formulas available on request. The mixes are easy to prepare.

GLAZE STAINS: Strong yellows, clean pinks, stable blue-greens and grays. A complete line of quality stains . . . laboratory controlled to insure maximum workability and uniformity.

GLAZE SPECKS: Years of leadership in glaze production enable us to recommend the best speck for your needs, sized to exacting specifications.

PREPARED GLAZES: For brick manufacturers who wish to produce limited quantities of glazed brick without investing heavily in glaze preparation equipment. These glazes are supplied completely ground and ready to mix with water. Wide range of brick and pastel colors available.

CALL ON Drakenfeld *YOUR PARTNER IN SOLVING COLOR PROBLEMS*

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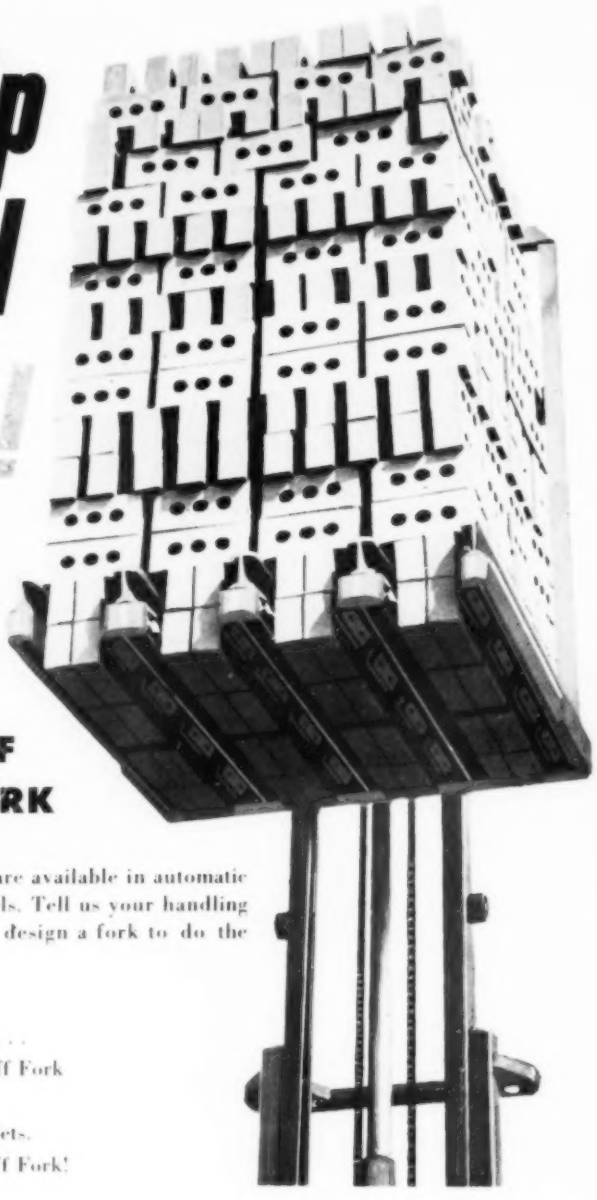
Grip and Go!



with a

BICKERSTAFF BRICK FORK

Bickerstaff Forks are available in automatic or hydraulic models. Tell us your handling problems, we will design a fork to do the job.

It's the quick way of setting and drawing kilns . . . carrying into and out of inventory. A Bickerstaff Fork loads brick direct to truck and freight cars without rehandling. It eliminates the use of pallets. Grip your brick moving needs with a Bickerstaff Fork! Watch profits go up . . . labor costs go down!

- Reduces kiln loading and unloading labor time from 72 to 12 man-hours.
- Increases kiln turnover 25%.
- Loads directly from kiln to truck, freight car or inventory without rehandling.

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The Proven Ceramic Binder

GET FAST RELIEF FROM SCRAP PILE HEADACHE

POLYFON goes right to work:

1. REDUCES temper water requirements, yielding stronger ware. Breakage during handling is greatly reduced or eliminated.
2. RELIEVES extrusion difficulties and improves plasticity.
3. PEPS UP lower grade raw materials.
4. EASY TO USE, with no expensive equipment required.
5. POLYFON gives more #1 yield with fewer production problems.

Write or Call for a Polyfon Demonstration in Your Plant

Polychemicals Division

SHerwood 4-8251, Ext. 336

WEST VIRGINIA PULP AND PAPER COMPANY • CHARLESTON, SOUTH CAROLINA

There'll be BIG NEWS a'poppin' at the

A.C.S. CONVENTION

and you'll get it first at the B&CR–CI CONFAB ROOM

CHICAGO May 17-20

Here's where you'll find executives of the industry discussing their problems with each other and with the important suppliers to the field over a friendly steaming cup. B&CR's and CI's experts in clay products and ceramic production and marketing will be on hand for consultation . . . 15 or more in all! If you want to meet someone from the industry, discuss a problem, or just rest your weary feet and take a coffee break, the B&CR—CI CONFAB ROOM is the place.

- ***COFFEE (Sunday Afternoon thru Wednesday)***
- ***PRIZES***
- ***EXHIBITS of interest to the entire industry***
- ***DIRECTORY BOARD OF SUPPLIERS***

SUPPLIERS: DON'T MISS THE BIG APRIL 1959 "BLUE BOOK" Convention Issue of BRICK & CLAY RECORD. It's the issue the entire industry uses for reference both at the convention and at home. Hundreds of bonus copies circulated at the convention. "As Advertised in B&CR" Easels provided for every advertiser at the convention.

MAKE YOUR SPACE RESERVATION TODAY!
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SPACE RESERVATIONS: MARCH 26 PLATES: MARCH 31

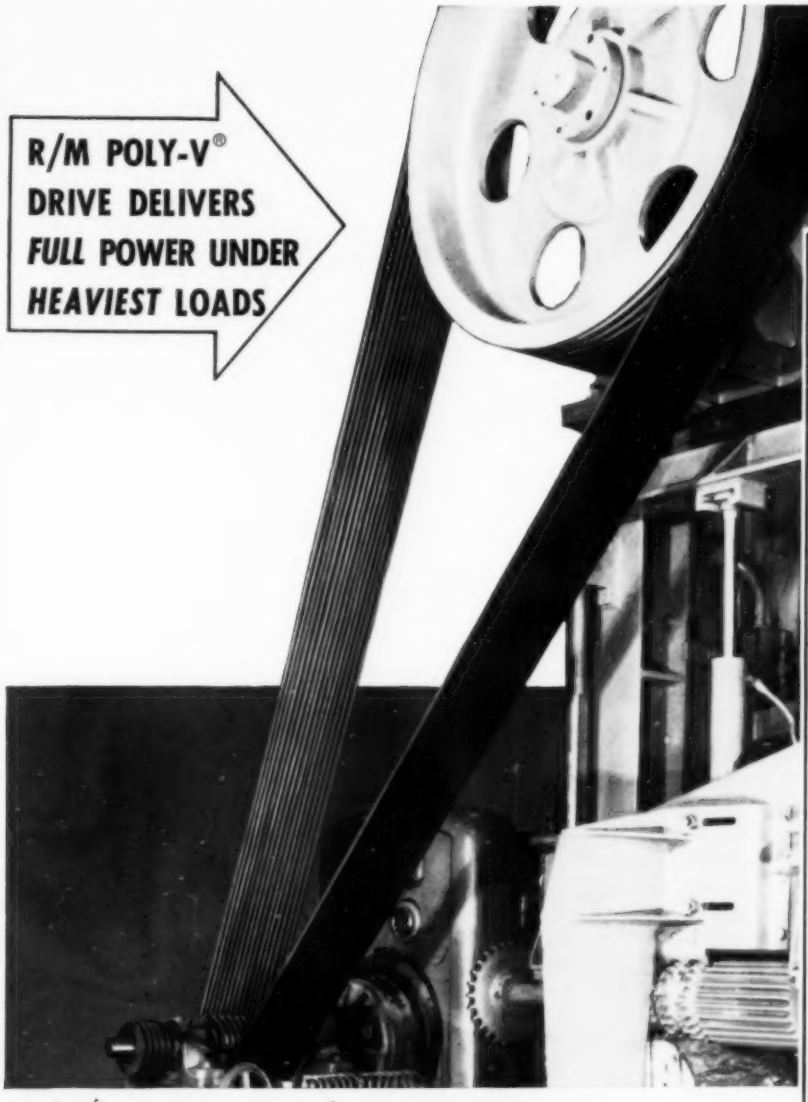
Brick & Clay Record

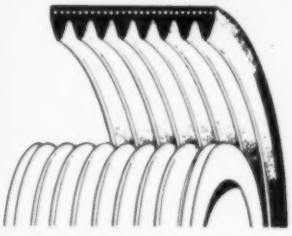
from one of America's Great Trade Publishing houses

INDUSTRIAL PUBLICATIONS, INC.
5 South Wabash Avenue
Chicago 3, Illinois

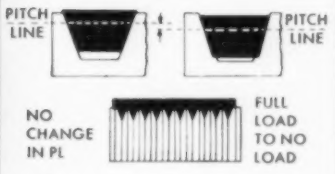
Printed in U.S.A.

**R/M POLY-V®
DRIVE DELIVERS
FULL POWER UNDER
HEAVIEST LOADS**



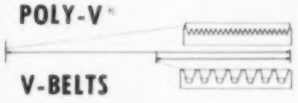


POLY-V* MAINTAINS CONSTANT EFFECTIVE PITCH DIAMETER AT ALL LOADS.



Full contact gives solid support under strength member. Speed ratio is unchanged. Belt position remains constant from *no* load to *full* load.

POLY-V* GIVES GREATER POWER CAPACITY . . . twice the contact area with half the face pressure.



POLY-V ELIMINATES V-BELT MATCHING PROBLEM

R/M POLY-V® DRIVE... MORE USE PER DOLLAR

Heavy loads can slow down ordinary gang saw drives . . . even throw off belts where conventional multiple V-belt drives are used. Not so with R/M Poly-V Drive. Design features of R/M's patented heavy duty drive assure constant belt speed ratios from *no* load to *full* load . . . *uniform* power delivery *without* loss in drive speed under the most rugged operating conditions and heaviest production schedules.

No drive delivers as much power in as little space as Poly-V* Drive. Single unit V-ribbed belt design provides *twice* the tractive surface of V-belts to deliver up to 50% more power in the *same* space as a multiple-belt drive . . . or *equal* power in as little as ⅔ the space! There are no belt "matching" problems with Poly-V, no equipment downtime for individual belt replacement. And because drive life is not limited to individual belt life, you get longer, trouble-free service on the job.

Just *two* Poly-V belt cross sections meet *every* heavy duty power transmission drive requirement. Let R/M engineers assist you in determining the best installation for your application. Contact your R/M representative . . . or write for Bulletin #M141.

RM606

*Poly-V is a registered Raybestos-Manhattan trademark.

BELTS • HOSE • ROLL COVERINGS • TANK LININGS • INDUSTRIAL RUBBER SPECIALTIES

MANHATTAN RUBBER DIVISION—PASSAIC, NEW JERSEY

RAYBESTOS-MANHATTAN, INC.

Other R/M products: Abrasive and Diamond Wheels • Brake Blocks and Linings • Clutch Facings • Asbestos Textiles • Mechanical Packings • Engineered Plastics • Sintered Metal Products • Industrial Adhesives • Laundry Pads and Covers • Bowling Balls

NEW EQUIPMENT

Portable Welder

A portable semi-automatic welder designed for either open arc hard-surfacing or submerged arc welding is now on the market. Known as the Handomatic, the unit features a universal semi-automatic wire feeder specifically designed for hard surfacing, build-up and mild steel welding, using tubular or solid wires. It can be readily connected to almost any welding machine, either AC or DC.

Hobart Bros. Co.

279/Circle on Reader's Service Coupon

Fork Lift Truck

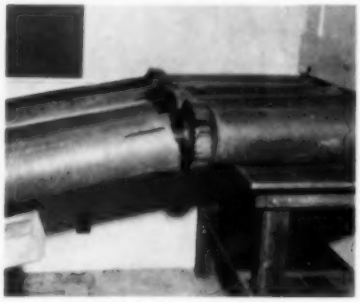
Erickson is making a pneumatic tired fork lift truck in the 2000 lb. at 24" center capacity class, with the truck designed particularly for use in rough yard conditions. Large 6:00 x 16 tires help achieve greater traction, higher under clearance. The unit shown has a side-shifter fork.

Erickson Power Lift Trucks, Inc.

280/Circle on Reader's Service Coupon

Root-Seal

K. T. Snyder now supplies a newly developed Root-Seal primer that, when used with Root-Seal hot pour plastic base sewer pipe joint compound, reportedly provides excellent joint sealing properties. Photograph shows how 10° deflection of joints is possible without compound cracking or breaking away from pipe surfaces. Advantages are said to be that mix is ready to use from container; no mixing, thinning, heating, tools or equipment required; no danger of burns.



K. T. Snyder Co.

281/Circle on Reader's Service Coupon

Strap Cutter

A new strap cutter is available that will cut strapping up to 1¼" wide and .035" thick yet is small enough to carry in a pocket. The tool, the E36 Strap Cutter, is designed for one-hand operation. The lower shear blade is beveled to slip easily under tensioned steel strapping. A strap guide keeps the strapping flat between the shearing surfaces of the blades.

Acme Steel Co.

282/Circle on Reader's Service Coupon

Transporter

Automatic has developed a new lightweight Transporter, Fork-Over-Arm stacker Model WOAT, which can handle single or double deck pallets or skids; can operate in narrow aisles or on floors unsafe for other types of trucks. The unit is available in 2,000, 4,000 and 6,000 lb. capacities, with a wide variety of fork lengths, widths and lifting heights.

Automatic Transportation Co.

283/Circle on Reader's Service Coupon

Moving?

If you're planning to move, remember to arrange for BRICK & CLAY RECORD to follow you. We need at least six weeks notice in advance of your moving date if you want to be sure to avoid missing an issue. Send your change of address to BRICK & CLAY RECORD, 5 South Wabash Ave., Chicago 3, Ill. Be sure to give both old and new address, zone number, and your name.

Buying Materials Equipment Services?

B&CR offers readers quick service for your inquiries concerning any of the keyed items in the New Products pages, on this card, or in the special information sections. You can also get additional, complete information on any advertisement in this issue.

All you do is circle the number of the editorial item or the page number of the advertisement on this card, and mail it to us.

CLAY BLOCK—The Allied Engineering ad in Jan. and Feb. offers condensed information on the new clay structural blocks, plus information about their consulting-engineering service. Allied Engineering Div., Ferro Corp.
226/Circle on Reader's Service Coupon

ELEVATORS—And Conveyors by Meco are engineered and built to your special requirements; available as complete units with framing or in component form for purchaser assembly. Manufacturers Equipment Co., Dayton 4, Ohio.
227/Circle on Reader's Service Coupon

COLORS—Pemco will send you a sample of a new dry engobe, ready to use. Just add water and spray on green brick. They also have a new sand for coating, called Brickwhite; with or without colored stain added. Pemco Corp.
228/Circle on Reader's Service Coupon

EQUIPMENT—Bonnot makes a full line of equipment including crushers, hammer mills, dry pans, wet pans, grinders, feeders, cutters, represses, dies, mixers, special machines to order plus, of course, the puggers, augers, extruders. Bonnot Co.
229/Circle on Reader's Service Coupon

BUILDINGS—Payne Brick Co. built a Varco clay storage building because "Varco had the building that could give us clay storage at low cost, and they could erect it fast." R. G. Varner Steel Products Inc.
230/Circle on Reader's Service Coupon

FORK TRUCKS—Erickson fork lift trucks have high traction because of large drive tires plus a 42" wheel base that applies greater ground pressure on drive wheels. Erickson Power Lift Trucks, Inc.
231/Circle on Reader's Service Coupon

BINDER—Polyfon is a binder of proven qualities for the ceramic industry. Greatly increases green and dry strength and number one production. Technical bulletins and "on site" technical demonstrations are available on request. Write or call Polychemicals Division, West Virginia Pulp and Paper Co., Charleston, S.C.
232/Circle on Reader's Service Coupon

BRICK FORKS—by Bickerstaff eliminate the use of pallets, does the work of eight men with brick barrows. Can increase kiln turnover 25%, reduce kiln load and unload labor time from 72 to 12 manhours. Bickerstaff, Inc.
233/Circle on Reader's Service Coupon

SUPERPAX—TAM has figures to show that the first cost of opacifiers can be misleading, why you can't afford to buy less than the best. A smaller amount of Superpax A is needed to reach a given point on the Gardner scale. Titanium Alloy Mfg. Co.
234/Circle on Reader's Service Coupon

INSTRUMENTS—With a complete line of instruments available, Minneapolis-Honeywell can offer you a coordinated instrument set-up, with ample choice to fit your particular needs. Minneapolis-Honeywell.
235/Circle on Reader's Service Coupon

HARROP KILNS—A Harrop kiln-dryer combination at Henderson, Tex., is producing 99% #1 grade brick, 1% #2 with no loss, on a daily production run of 100,914 brick. Harrop Ceramic Service Co.
236/Circle on Reader's Service Coupon

CAR TOPS—Paco car tops are reported to save up to 50% in car top replacement costs because the tops are lighter, stronger weight, lighter weight, stronger, highly resistant to thermal shock. North State Pyrophyllite Co.
237/Circle on Reader's Service Coupon

1 CIRCLE Numbers of Interest to You! **2 MAIL** This Card at Once! **3 RECEIVE** Free Product Information

Please send me more information concerning the items I have Circled. **3-59**

226 Allied Engineering
227 Manufacturers Equip.
228 Pemco Corp.
229 Bonnot Co.
230 R. G. Varner
231 Erickson Power Lift
232 W. Va. Pulp & Paper
233 Bickerstaff, Inc.
234 Titanium Alloy
235 Minneapolis-Honeywell
236 Harrop Ceramic
237 North State Pyro.
238 Baltimore & Ohio
239 North American Mfg.
240 Swindell-Dressler
241 Stanley Strapping
242 Raybestos-Manhattan
243 Miller Equipment
244 Chambers Bros.
245 U. S. Hoffman
246 T. L. Smith
247 Paris Mfg. Co.
248 Kimberly-Clark
249 Universal Atlas
250 Ferro Corp.
251 Stoody Co.
252 Chisholm, Boyd & White
253 Robinson Ventilating
254 Berkshire Chemicals
255 Philadelphia Quartz
256 Ceramic Color & Chem.
257 Nat'l Paint & Mang.
258 Stanley Steel
259 Chisholm, Boyd & White
260 Bradney Machine
261 Scandinavia Belting
262 Robeson Process
263 Thayer Scale
264 Ed. Orton
265 F. R. Hannon
266 Cement Gun
267 Drakenfeld
268 Buffalo Forge
269 J. C. Steele
270 Walter Stoll
271 Fate-Root-Heath
272 Ludlow-Saylor
273 Rockfacer Co.
274 Besser Co.
275 American Clay Mchry.
276 W. S. Tyler
277 Deister Concentrator
278 Link-Belt
279 Hobart Bros.
280 Erickson Forks
281 K. T. Snyder
282 Acme Steel
283 Automatic Trans.
284 Process Solvent
285 Lima Motors
286 O. Hommel
287 Hauck Mfg.
288 Cardinal
289 Dodge Mfg.
290 Massey-Ferguson
291 Williamsson Adhesives
Page 2 Bonnot Co.
Page 3 Berkshire Chem.
Page 4 Robinson Ventilating
Page 5 Link-Belt
Page 6 R. G. Varner Steel
Page 7 Kimberly-Clark
Page 8 Dodge Mfg.
Page 9 Metal & Thermit Corp.
Page 10 Lead Industries Assoc.
Page 11 Westinghouse Electric
Page 12 Pearne & Lacy Machine
Page 13 R. F. Drakenfeld & Co.
Page 14 Bickerstaff, Inc.
Page 15 W. Va. Pulp & Paper
Page 17 Raybestos-Manhattan
Page 22 North State Pyrophyllite
Page 23 Builders Equipment
Page 24 Buffalo Forge
Page 25 Besser Co.
Page 26 Sanford-Day Iron Works
Page 27 Williams Patent Crusher
Page 28 Towmotor Corp.
Page 29 Chambers Bros.
Page 32 Denver Fire Clay
Page 33 Signode Steel
Page 34 Stephens-Adamson
Page 39 Titanium Alloy
Page 41 Ferro Corp.
Page 45 Barber-Greene
Page 49 Lanly Co.
Page 54 Stoody Co.
Page 55 Miller Equipment
Page 56 Chisholm, Boyd & White
Page 59 Clearfield Machine
Page 60 Rockfacer Co.
Page 63 Gates Rubber
Page 64 B. Lassman & Sons
Page 65 Bradney Machine
Page 65 Clipper Mfg. Co.
Page 66 National Paint & Manq.
Page 66 Besser Co.
Page 67 Eclipse Fuel Eng.
Page 68 International Clay
Page 68 Foote Mineral
Page 68 Universal Vibrating
Page 69 D. B. Hendryx & Assoc.
Page 70 O. Hommel
Page 70 W. S. Tyler Co.
Page 71 Paris Mfg.
Page 71 Edw. Orton
Page 72 Deister Concentrator
Page 72 Flexible Steel
Page 73 Ceramic Color & Chem.
Page 73 Walter Stoll
Page 73 Chase Foundry
Page 74 Eagle Iron
Page 74 Overstrom
Page 74 Des Moines Glove
Page 74 Mason Color & Chem.
Page 75 F. R. Hannon
Page 75 Engineering Assoc.
Page 78 J. C. Steele
Page 79 Fate-Root-Heath
Page 80 American Clay Machinery

NAME _____ TITLE _____

COMPANY _____

STREET _____

CITY _____ ZONE _____ STATE _____

This Card Void After May 28, 1959

COAL—B&O has coal that offers constant supply, constant efficiency, constant low cost; bituminous coals for every purpose. Baltimore & Ohio Railroad.

238/Circle on Reader's Service Coupon

BLOWERS—Turbo blowers by North American are said to save on first cost, installation cost, operating and maintenance cost. Sizes to fit your needs, 60 to 13,000 cfm, 1/3 to 75 hp, 1800 or 3600 rpm. North American Mfg. Co.

239/Circle on Reader's Service Coupon

TUNNEL KILN—By Dressler at Payne Brick is a multi-burner installation. Pre-heating and oxidizing problems of that clay are handled by atmospheric recirculation and excess-air type burners. Kiln has a total of 72 burners, divided into 6 groups for control. Swindell-Dressler Corp.

240/Circle on Reader's Service Coupon

STRAPPING—Stanley tighteners, in the O model, are reported to feature easy and quick insertion and alignment of strapping; light weight and balance for handling ease; sturdy construction; unlimited takeup. Stanley Steel Strapping, Div. of Stanley Works.

241/Circle on Reader's Service Coupon

CONVEYING—The XDC cover on R—M belts is said to give a degree of protection not possible in other belts against wear, tear, cuts and abrasion. Heavy-duty belt is moisture resistant and mildew-proof. Raybestos-Manhattan, Inc.

242/Circle on Reader's Service Coupon

KILNS—Miller's Cros-Flo tunnel kilns use controlled, scientific cooling for high production. Company also makes hammer mill crushers, conveyor equipment, offers engineering service. Miller Equipment Co.

243/Circle on Reader's Service Coupon

CHAMBERS—The Glen-Gery plants use more than 30 Chambers machines, including nine of the 11C or 12C combined machines; 10 cutters; 3 air pressure controlled pans; 8 of the #26 pug mills. Chambers Bros. Co.

244/Circle on Reader's Service Coupon

CONVEYING-VACUUM—Hoffman has portable and stationary conveying-vacuum units. Units can either convey wide range of materials or be used for vacuum cleaning tasks, as in periodic kilns. U. S. Hoffman Machinery Corp.

245/Circle on Reader's Service Coupon

TURBINE MIXER—The Smith Turbine Mixer is a high speed, compact, low-headroom mixer that's reported to give 4 times the mixing speed of other mixers, increasing refractory production without an increase in man hours or space. T. L. Smith Co.

246/Circle on Reader's Service Coupon

DRILLING—Fast drilling with heavy duty, four speed auger, finger tip control, 65 hp motor, all drives mounted on Timken Roller bearings; three leveling jacks to insure straight holes. Paris Mfg. Co.

247/Circle on Reader's Service Coupon

ADDITIVE-A—Use of this clay conditioner can help you get more even temper, better textures, increased green strength, improved clay workability, reduced dryer loss. Kimberly-Clark Corp.

248/Circle on Reader's Service Coupon

CAST CAR TOPS—Car tops cast in place with Lumnite are easy to install, economical. Units have long life, withstand high heat, retard flow of heat to the car's framework. Universal Atlas Cement.

249/Circle on Reader's Service Coupon

BRICK COLORS—Ferro has engineering service to help you set up techniques, processes and quality controls for glazing, engobe, body stains or sandblasting. Ferro Corp., Color Div.

250/Circle on Reader's Service Coupon

HARD-FACING—Muller plow life can be increased, at least tripled and under with special treatment as much as 1000%, with use of Stoody 121 and Stoody 130 or Borod. Stoody Co.

251/Circle on Reader's Service Coupon

DRY PRESSING—Gladding, McBean is in profitable production of a dry press SCR brick, used for building partitions. Units are made on a C,B&W press that gives product free from kiln markings, with straight, square edges. Chisholm, Boyd & White Co.

252/Circle on Reader's Service Coupon

FANS—By Robinson are pre-engineered to your requirements for kilns, dryers, sintering belts. Types and sizes to give you efficient air handling, low power consumption, extended mechanical life. Robinson Ventilating Co.

253/Circle on Reader's Service Coupon

VITROMIX—Lower firing temperatures, greater production and better quality are three features you can have with use of Vitromix body flux. Full information from Berkshire Chemicals Inc.

254/Circle on Reader's Service Coupon

SOLUBLE SILICATES—Over forty PQ products, liquid and dry, are available for your selection; for use as binders, coatings, deflocculants. Philadelphia Quartz Co.

255/Circle on Reader's Service Coupon

CERAMIC COLOR—Any standard or special color can be matched, with consistent high quality of glaze or engobe stains, by Ceramic Color & Chemical Mfg. Co.

256/Circle on Reader's Service Coupon

1 CIRCLE Numbers of Interest to You!

2 MAIL This Card at Once!

3 RECEIVE Free Product Information

FIRST CLASS
Permit No. 183
Chicago, Ill.

BUSINESS REPLY MAIL
No Postage Stamp Necessary If Mailed In the United States

POSTAGE WILL BE PAID BY

BRICK & CLAY RECORD

5 South Wabash Avenue

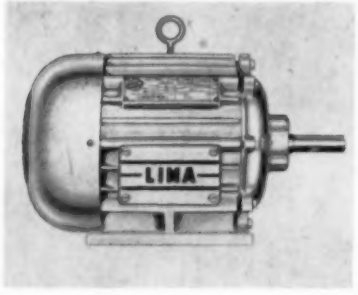
Chicago 3, Illinois

Stain Remover

Sure Klean is a product designed to remove stains caused by vanadium salt in brick. Compound is said to dissolve in minutes the metallic salts; brush on the wall, let sit for 10-15 minutes, rinse. The remover will work on brick that have been silicone coated, in a slightly different process. Said to need no gloves for application, reported to remove brown stains caused by use of muriatic acid.

Process Solvent Co.

284/Circle on Reader's Service Coupon



Electric Motor

A line of new re-rated NEMA type E totally enclosed, fan cooled electric motors, by Lima, is designed for use in atmospheres containing excessive moisture or abnormal quantities of dirt or other abrasives. All standard commercial frequencies and voltages below 600 V. are available.

Lima Electric Motor Co., Inc.

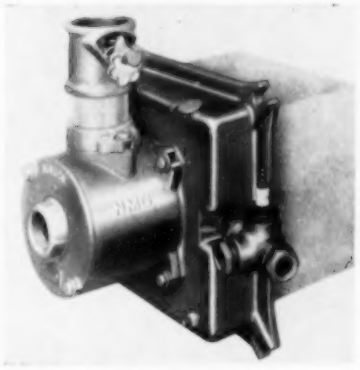
285/Circle on Reader's Service Coupon

New Yellow

The perfection of a zirconium-vanadium yellow glaze stain, said to cost substantially less than its tin-vanadium counterpart, has been announced by the Hommel research lab. The company says the new stain is free of all soluble vanadium salts, with field test reports noting superior strength and stability at higher temperatures. The stain is recommended for both zinc and zincless glazes and can also be used as a body stain. It can be blended with other stains to obtain green.

O. Hommel Co.

286/Circle on Reader's Service Coupon



Nozzle Mix Burner

A new burner has been developed for heating processes requiring sealed-in firing with any commercial fuel gas, with the model called the NMG. The unit is reported to offer the application flexibility and advantage of firing with nozzle mixed gas over a wide range of burner capacity, with exceptional flame stability. High forward velocity of the combustion gases is said to produce greater heat distribution.

Hauck Mfg. Co.

287/Circle on Reader's Service Coupon

Stone Saw

A new, low cost stone cutting saw that is said to be 30% lighter in weight and 50% lower in initial cost is being made by Cardinal. The S-200 saw, powered by 2 hp totally enclosed, fan cooled motor, will make cuts up to 6′ long on material up to 3″ thick with a 14″ diamond or abrasive blade.

Cardinal Engineering Corp.

288/Circle on Reader's Service Coupon

Dodge V-Belts

A new 44 page bulletin, A-695, by Dodge describes a new line of V-belt drives that are smaller, cost less, weigh less and require less space than conventional V-belt drives, the maker reports. The book contains photographs, engineering drawings, construction features, etc.

Dodge Mfg. Co.

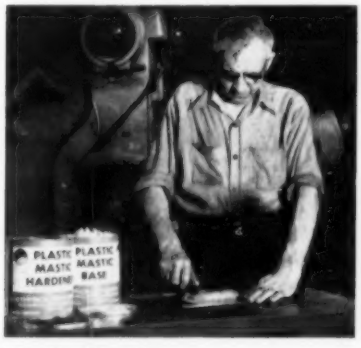
289/Circle on Reader's Service Coupon

Tractor-Loader

A Davis 99 economy loader is new in the line of Massey-Ferguson, with the unit having a capacity of 2000 lbs. at half height, 1500 at full height; available for the Work Bull 202, all utility models of M-F tractors, also tractors by Ford, IH, A-C and Oliver. The new unit was built 15% stronger than previous models.

Massey-Ferguson Industrial Div.

290/Circle on Reader's Service Coupon



Plastic Mastic

A new expoxy-polyamide, called Plastic Mastic, is designed for use as a general repair material, coming in a repair kit. Can be used for repair of masonry, brick, fixtures, for filling holes and cracks, said to bond easily to concrete, ceramics, glass, metals, most plastics. Each kit contains a can of epoxy resin, another can of hardener, in sizes from a quart to 2 gals.

Williamson Adhesives Co.

291/Circle on Reader's Service Coupon

Photo shows PACO 4½" x 8" x 9" car tops set on end and used as perimeter block. Top deck is constructed with 4½" x 8½" x 18" PACO car tops. Each corner has a 7" x 8½" x 9" cored corner block. Perimeter and corner blocks are filled with lightweight insulation.

PACO CAR TOPS can cut your replacement costs as much as 50% — and increase your profits! The reason is simple. Paco Car Tops are made from the mineral pyrophyllite. This unusual, superior raw material permits the manufacture of thinner wall, larger core car top that is lightweight, stronger and highly resistant to extreme thermal shock.

PACO CAR TOPS do not have a softening point below actual fusing point, providing greater resistance to hot load deformation. The result is better, more efficient production. Paco Car Tops are easy to handle and install, and simple to replace individually as needed.
There is a PACO engineer as close as your telephone—or write for complete information!

SEE OUR CATALOG IN
Ceramic data book

NORTH STATE PYROPHYLLITE COMPANY, INC.

Telephone BRoadway 4-7055 Greensboro, North Carolina

OTHER PACO PRODUCTS INCLUDE: • Paco Plastic • Pacocast • Paco H.T. Cements • Paco Fire Brick Mortar • Paco Side Car Brick • Paco Fire Brick • Paco Ladle Lining • Paco Heatzone Compound

Cut Unloading Time in ½ . . .

17 Superlites On the Job at Denver Brick & Pipe Co. Prove Satisfaction

There's no place in a modern operation for the wasteful inefficiency of hand unloading, or even slow hand-operated unloading. With SUPERLITE UNLOADERS, such as the one pictured above (one of 17 on the job at the completely mechanized Denver Brick & Pipe Co.), you can actually cut your delivery time in half. That means twice as many deliveries in one day—each man and each truck doubles efficiency.

SUPERLITES handle gently, too. Proved and approved under all conditions, they can be used on any flat bed truck or trailer regardless of length.

If you WANT to slash your delivery costs by 50% or more, contact us at once—by letter, wire or phone. Collect calls cheerfully accepted!

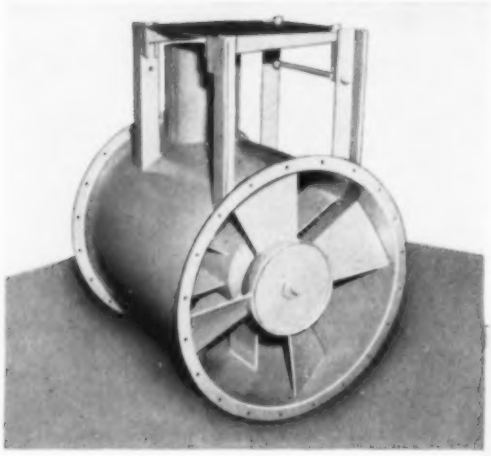
Fast—Effortless—Economical SUPERLITE UNLOADING

BUILDERS EQUIPMENT COMPANY

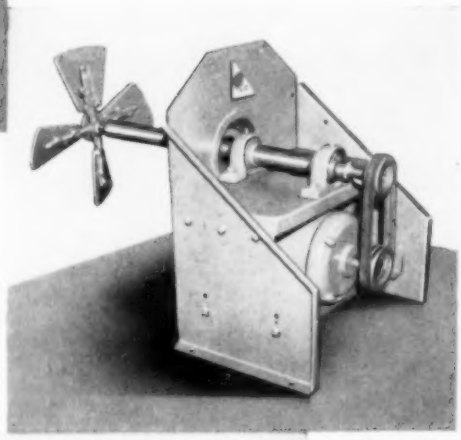
3810 NORTH CENTRAL AVENUE
PHOENIX, ARIZONA

Telephone Numbers:
CRestwood 4-8321
CRestwood 4-8431

SEVERE KILN RE-CIRCULATION CONDITIONS CALL FOR SPECIAL "BUFFALO" FANS

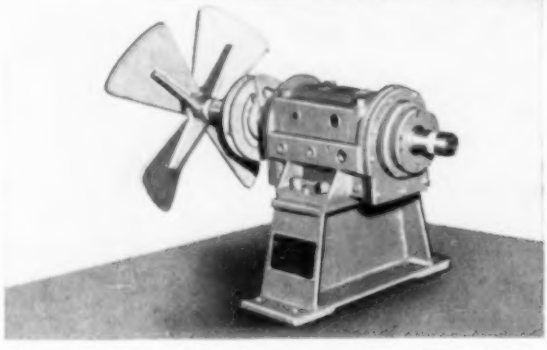


Large Brick Company utilizes these special "Buffalo" Type "B" Tube-Propeller Fans to provide 15,000 cfm at 360° F. Driven by V-belt through fairings, units are installed between inner and outer walls of kiln. Motor is located outside of kiln, away from heat.



Used by Leading Manufacturers of Tunnel Kilns, these "Buffalo" Type "NV" units are built into many of the package kilns in wide-spread use. Drive mounts against outside wall; shaft extends into kiln. Wheel is correctly shrouded to circulate hot air within kiln.

Throughout the Refractory Field, many of these special stainless steel "Buffalo" Type "NV" fans are used to handle air up to 1600° F. Shaft heat is reduced by heat slinger on shaft just behind the "NV" wheel. Oil leakage and fire hazards are eliminated by rigid, water-cooled bearings with special labyrinth seals. This construction was specially-designed by "Buffalo" engineers to fulfill the specific requirements.



Your "Buffalo" engineering representative will be glad to assist in planning the fans required for your jobs. Call him today, or write for Bulletin FM-2345.

Air circulation in severe kiln applications demands fans that can stand up to punishing day-after-day service without breakdown. Specially designed "Buffalo" Fans like those on this page are providing this kind of dependable service in installations all over the country. These special designs are based on "Buffalo" Type "NV" Heavy-Duty Propeller Fan Wheels. The blades are correctly shaped for optimum air moving at slow speeds. Die-stamped from heavy steel plate, these blades are firmly welded to sturdy, durable spiders.

Also handling hot air in a wide variety of kiln applications are specially-designed "Buffalo" Centrifugal Fans. "Buffalo" Exhausters with "M" wheels are supplying induced draft for lime kilns in many installations. All these special-purpose "Buffalo" Fans are engineered and built to provide maximum efficiency with a minimum of maintenance.

BUFFALO FORGE COMPANY

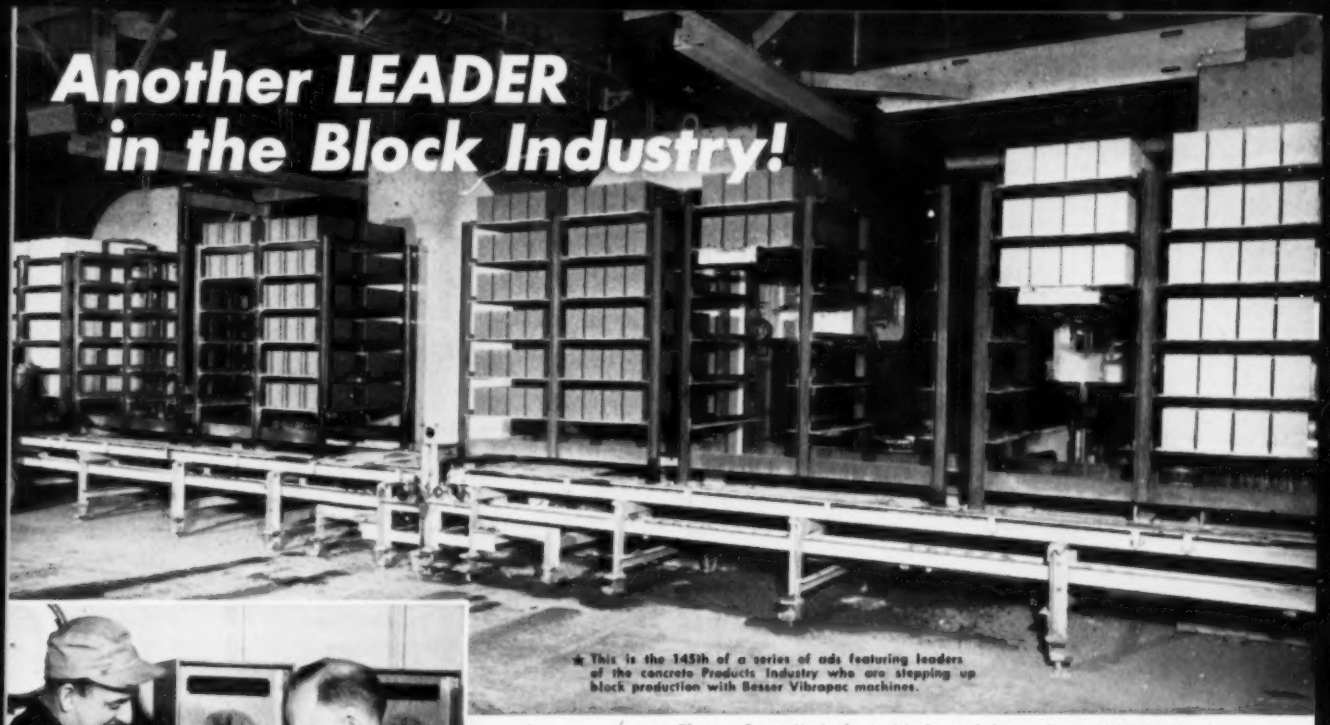
Buffalo, N. Y.

Buffalo Pumps Division, Buffalo, N. Y.

Canadian Blower & Forge Co., Ltd., Kitchener, Ont.

VENTILATING • AIR CLEANING • AIR TEMPERING • INDUCED DRAFT • EXHAUSTING • FORCED DRAFT • COOLING • HEATING • PRESSURE BLOWING

Another LEADER in the Block Industry!



★ This is the 145th of a series of ads featuring leaders of the concrete Products Industry who are stepping up block production with Besser Vibrapac machines.

Exact finish time of each machine is recorded on Besser Automatic Feed Control panels in office. Here Superintendent Simmons and Vice President Parisian are inspecting graph.

The two Besser-Matics located in front of the two Besser VIBRAPACS. After foreman starts machines in the morning, all operations are automatic.

FIRST fully automatic block plant uses BESSER EQUIPMENT

• Standard Block and Supply Company, Lansing, Michigan is the first block plant to go *fully automatic*. And, of course, it's a MULTIPLE VIBRAPAC plant. Back in 1939, the company began the manufacture of block in a small way, and it wasn't until 1950 that they installed their first VIBRAPAC. Success with this first machine paved the way for another VIBRAPAC in 1956.

Automation begins with automatic weigh batching which eliminates the mixer man. Two BESSER-MATICS automatically load green block, index new rack, unload cured block, depalletize cured block and return the empty pallets to the machines. The Besser Auto-Cuber completes the block handling job by automatically placing block in cubes.

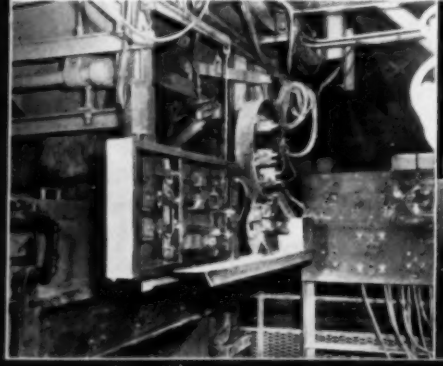
Automation implies greatly stepped up production, plus savings in man-hours. The foreman starts the two machines in the morning and no manpower is necessary until the lift truck drivers begin to function. Records kept by the company indicate the two BESSER-MATICS have increased block production in the first four months of operation by 19.5% . . . 17.5% less man-hours and 19.7% less cull block. Now after a year's operation the figures are still more favorable to higher production of quality block.

Why not investigate automation for YOUR plant. Ask your BESSER representative for further details.

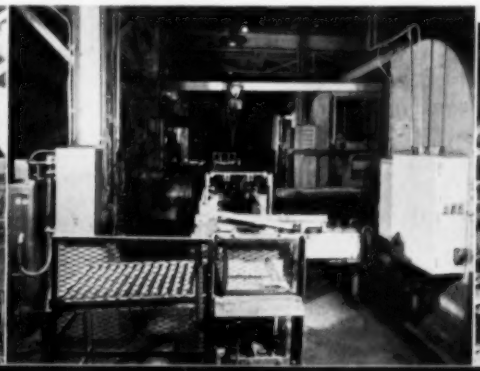
BESSER Company
Dept. 139, Alpena, Mich., U. S. A.
FIRST IN CONCRETE BLOCK MACHINES
A8-174

Standard has fully paved yard for storing block. Plant bins and superstructure are shown in background.

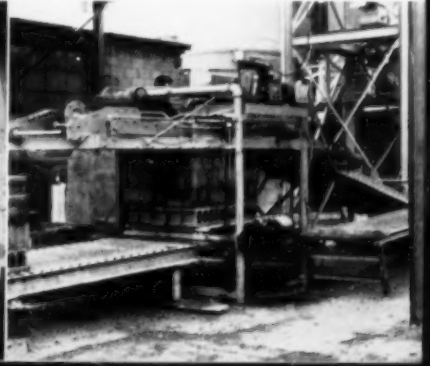
Automatic weigh batchers located on floor above Vibrapacs. They control charging of mixers with cement, aggregate and water.



Depalletizer, in foreground, transfers cured block to conveyor and returns the empty pallets to the Vibrapac block machine.



Besser Auto-Cuber located outside of plant. Only one man required for cubing all block from two Vibrapac machines.



Kilns Everywhere Now Standardizing on New S-D "Floater" Wheel!

- RUNS FREE AND EASY
- NEW IMPROVED LUBRICANT
- STOPS HIGH COST MAINTENANCE
- BEARINGS REMAIN IN PERMANENT ADJUSTMENT

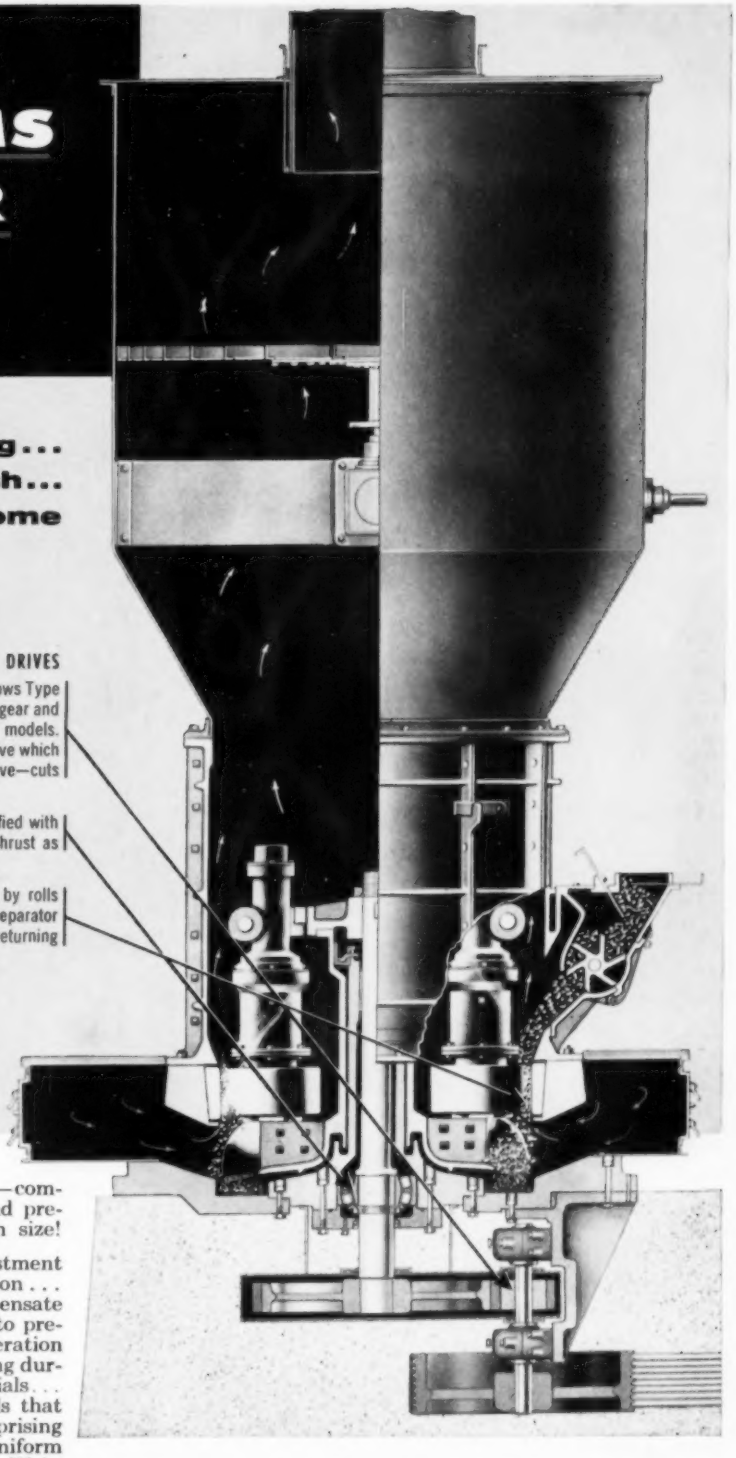
Scores of brick plants all over the nation recognize the smooth running, low maintenance values of S-D "Floater" Kiln Car Wheels. Technically, the wheel is designed specifically for kilns, having such features as a completely closed outer hub with an inner hub protected by two special grease seals. These features effectively eliminate dust while retaining the high temperature lubricant for long periods of several months. Send us photostatic copy or blueprint of your present cars. With this information, we can quote you on replacement wheels. Savings are great with these free and easy running S-D "Floaters"! *Sanford-Day Iron Works, Inc., P. O. Box 1511, Knoxville, Tenn.*

SANFORD-DAY

KNOXVILLE TENNESSEE

Engineers and Manufacturers of PRECISION WHEELS for brick and clay, ceramic, mining and steel industries!

WILLIAMS ROLLER MILLS



- **Quality Fine Grinding... 20 Mesh To 400 Mesh... Micron Sizes On Some Materials**

EXCLUSIVE GEARLESS AND SPUR GEAR DRIVES

Another Williams advancement! Cutaway shows Type D Mill with Spinner Air Separator with spur gear and pinion drive used on Standard and larger models. Smaller sizes have simple gearless V-belt drive which is easier to maintain than bevel gear drive—cuts labor and downtime.

Bearing alignment of central shaft is simplified with only 2 bearings, the bottom one carrying thrust as well as radical load.

NOTE FLOW OF MATERIAL being ground by rolls rotating against bull ring, then air-swept to separator which discharges finished product while returning coarse tailings for regrinding.

From raw material to finished product—completely automatic grinding, blending and precision classifying to 20 mesh or micron size!

Self-adjusting feed rate . . . instant adjustment for sizing, even while mill is in motion . . . continuous automatic take-up to compensate for wear . . . constant rising air current to prevent build-up of fines and inefficient operation . . . automatically controlled hot-air drying during grinding of moisture-carrying materials . . . all are features of Williams Roller Mills that virtually guarantee increased output, surprising cost reductions and exceptionally high uniform quality. Get all the facts immediately . . . *Write today for catalog.*

WILLIAMS PATENT CRUSHER & PULVERIZER CO.

2709 N. 9th St. St. Louis 6, Mo.

Hammer Mills | Helix-Seal Mills | Air Separators | Vibrating Screens | Feeders | Impactors

WILLIAMS

CRUSHERS GRINDERS SHREDDERS

Oldest and Largest Manufacturers of Hammer Mills in the World

Strength to spare!

From tread to mast a Towmotor Fork Lift Truck is *built to last.* Its all-welded chassis—special carbon-steel carriage—one-piece forged forks—reserve-power engine—*rugged construction from the floor up!*—give Towmotor a margin of extra stamina that outlasts any truck doing anywhere near the same day's work.

See how you can apply this strength to *move more goods, faster, at less cost.* Ask for new "Pace-Maker" Booklet SP-23 . . . and Certified Job Studies applying to your type of handling operations. (Also ask about new foot-controlled *Towmostatic Drive,* available *now* on some Towmotor models.) Write Towmotor Corporation, Cleveland 10, Ohio.

COME SEE US AT
1959 MATERIAL HANDLING INSTITUTE'S EXPOSITION
CLEVELAND AUDITORIUM
JUNE 9-12 1959
BOOTHS 1302-1307-1404

TOWMOTOR ® **-GERLINGER**
THE ONE-MAN-GANG

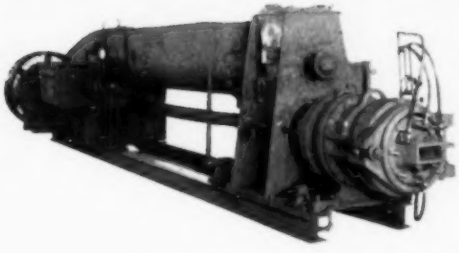
LEADERS FOR 40 YEARS IN BUILDING FORK LIFT TRUCKS, CARRIERS AND TRACTORS

Gerlinger Carrier Co. is a subsidiary of Towmotor Corporation

Glen-Gery SHALE BRICK CORPORATION

IN THESE
Glen-Gery
PLANTS:

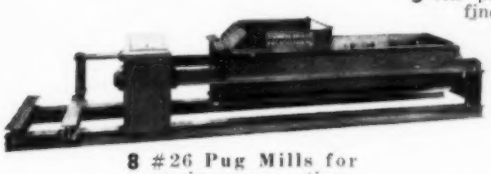
- Ephrata
- Harrisburg
- Middletown
- Reading Shale
- Shoemakersville
- Watsontown
- York Colonial
- Beavertown
- Wyomissing



9 #11C or 12C Modern **combined machines** plus other older models.

10 **Cutters** featuring some of the latest Number 30 Series.

3 Air pressure controlled **Pans** plus fine grinding rolls.



8 #26 **Pug Mills** for maximum pug action.

For details, write without obligation to:

SERVING YOUR INDUSTRY FOR OVER 100 YEARS

CHAMBERS BROTHERS CO. 1857 1959
52nd & Media Streets · PHILADELPHIA 31, PA.

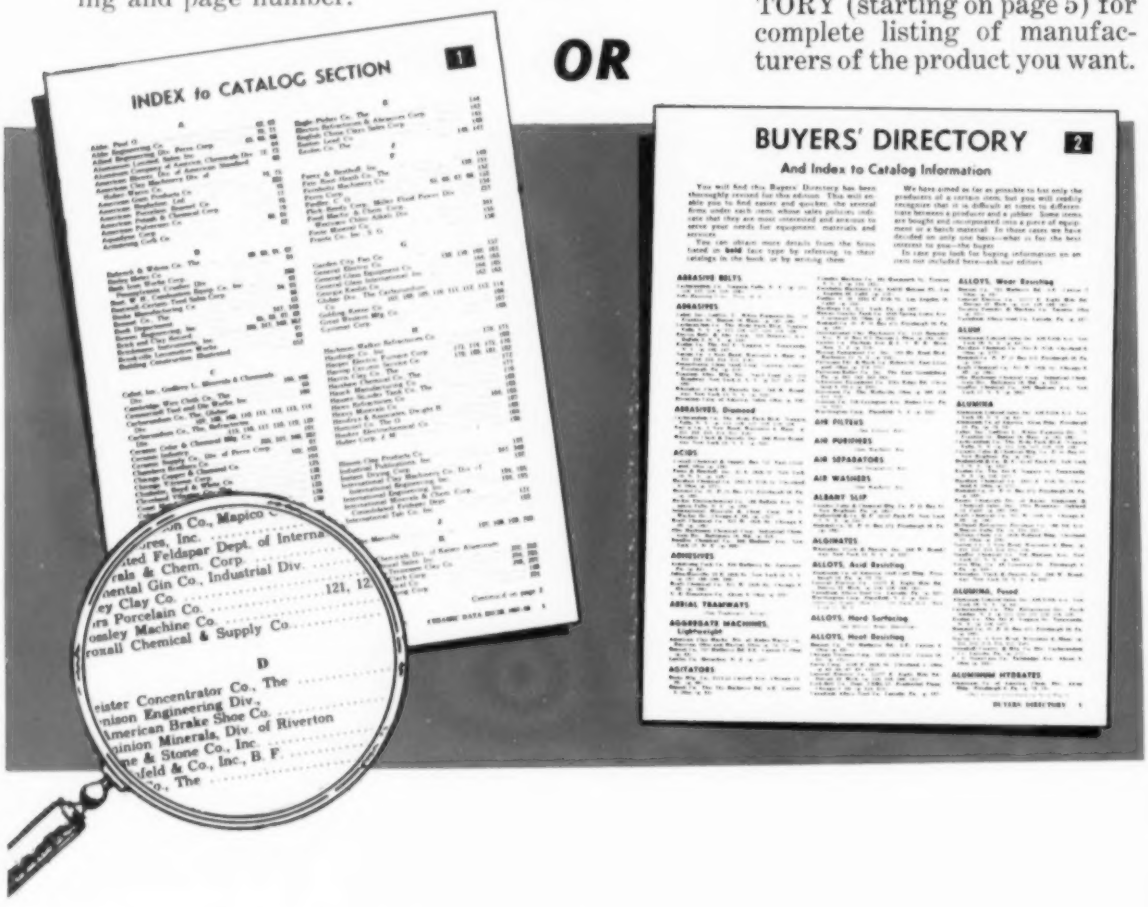
How To Use Your NEW

1. FIND THE PRODUCT YOU NEED.

If you know the manufacturer, check the advertisers index (page 1) for alphabetical listing and page number.

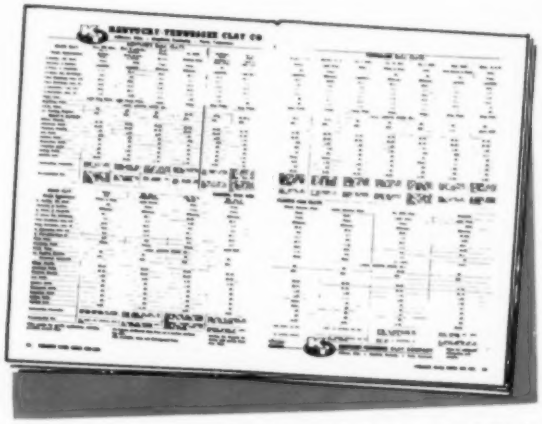
OR

Check the BUYERS DIRECTORY (starting on page 5) for complete listing of manufacturers of the product you want.



2. READ THE CATALOGS CAREFULLY.

You will find most advertisers give specifications and data on their products and services from which you can determine their application to your needs.



Ceramic Data Book

Your Directory of Industry Suppliers

3. NEED MORE INFORMATION?

Simply fill out one of the handy return cards (page 335) —or write the manufacturers direct.

Note:—Many CDB advertisers list their local branch offices and representatives. Often, a local phone call will get quick results.

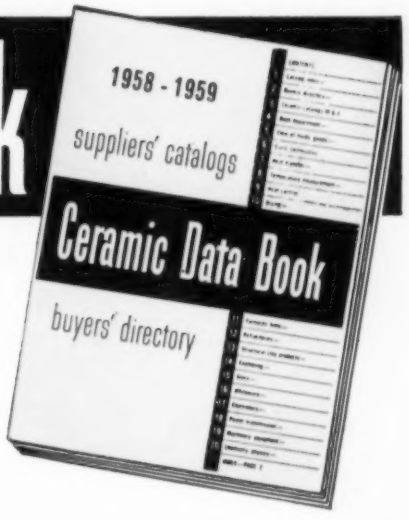
4. CHECK ALL THE CATALOGS IN YOUR NEW CDB.

You will find new advertisers with new products — many of which can help solve your plant problems—make your operation more efficient.

5. ALWAYS KEEP CDB HANDY

for ready reference for your plant problems, expansion or modernization. The editorial-engineering section (starting on page 501) contains up-to-the-minute details for your guidanc·

Ceramic Data Book



5 South Wabash Avenue

Chicago 3, Illinois

Phone: FRanklin 2-6880

CUT

Crucible Costs

by using the right crucible for the job

Why use a crucible that far exceeds temperature requirements... at five times the cost... when you can buy DFC's time proven crucibles to do your ***exact*** job?

For risering, pouring, spouting and gating, high precision investment casting, lost wax process and permanent mold work... DFC low cost crucibles are adaptable to almost all types of metal.

Refractories stamped DFC have 83 years of blending and firing know-how behind them. Their quality, serviceability, accuracy and minimum pick-up surfacing, are known world wide.

So take a long look at ***your*** crucible costs ***today*** and you'll find Denver Fire Clay will save you money. Write for full information regarding ***your*** crucible situation.

Please send full information on Crucibles; _____Investment Casting, _____Lost Wax Casting, _____Permanent Mold Casting, or other metallurgical clay goods_____

Name.....

Title.....

Firm.....

Address.....

DF8-2

DFC

THE DENVER FIRE CLAY COMPANY

3033 BLAKE STREET DENVER, COLORADO

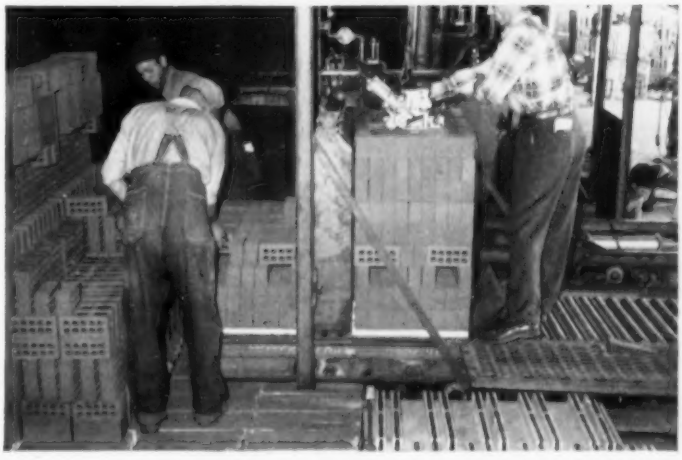
DENVER • SALT LAKE CITY • EL PASO

BRICK ARE STACKED AND BLENDED DIRECTLY FROM KILN CAR IN SELF-UNITIZED PACKS

Stacking patterns and pack sizes were designed for pack-haulers and Superlite trucks.

PACKAGE IS STRAPPED WHILE NEXT ONE IS STACKED

First package has been moved by air power under power elevated gate and is being strapped. Strapping station side of gate has 5 strap chutes. Stacking side of gate is smooth. A powered depressible package stop at strapper's feet keeps bricks in perfect alignment.



Up to 75,000 brick packaged per day by 5 men

Equipment investment less than $1,000

This is one way to package brick. It's a good way because it is saving time and money every working day. It was developed in full detail for a major manufacturer by a Signode man who observed, considered, and *worked* with the customer. It may not be best for your set-up. But the experience and ingenuity of a Signode man, plus the hand, power, and automatic tools and machines available to him can almost certainly save you a good deal of money in your packaging operation. The Signode man near you will be glad to make the necessary arrangements. Call him today, or write:

SIGNODE

First in steel strapping

SIGNODE STEEL STRAPPING CO.

2629 N. Western Avenue, Chicago 47, Illinois

Offices Coast to Coast. Foreign Subsidiaries and Distributors World-Wide

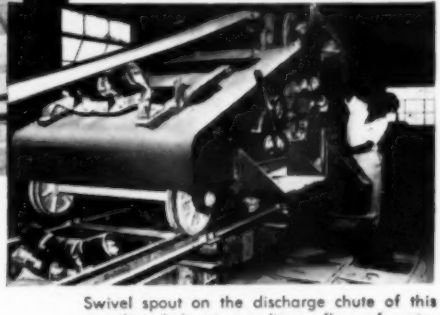
In Canada: Canadian Steel Strapping Co., Ltd., Montreal • Toronto

STEPHENS-ADAMSON

REDUCES CLAY HANDLING COSTS FOR REFRACTORY IN MEXICO

By engineering and equipping the plant with an improved clay handling system, STEPHENS-ADAMSON enabled this refractory, located in Mexico, to meet the ever-growing demands for its products. STEPHENS-ADAMSON over the past half-century has engineered and equipped many such systems. Each plant requires special consideration of its handling problems or requirements to assure maximum efficiency and economy of operation. When lower handling costs are your aim consult the people who know bulk materials handling best . . . STEPHENS-ADAMSON.

Twin 18-inch belt conveyors on horizontal run over storage bins handle 100 tons per hour at speed of 250 feet per minute.



Swivel spout on the discharge chute of this traveling belt tripper directs flow of material to desired bin opening.

- Bucket Elevators
- Belt Conveyors
- ZIPPER Conveyor-Elevators
- REDLER Conveyor-Elevators
- Circular Bin Discharger
- TELLEVEL Bin Level Controls

Request literature on products above!

S-A
ENGINEERED BULK HANDLING SYSTEMS
MATERIALS HANDLING PRODUCTS
SPEEDRAMP® PASSENGER CONVEYORS
SEALMASTER® BALL BEARING UNITS
SPHERICO® BEARINGS & BODY BORE

ENGINEERING DIVISION
STEPHENS-ADAMSON MFG. CO.
GENERAL OFFICE & MAIN PLANT, 39 RIDGEWAY AVENUE, AURORA, ILLINOIS

PLANTS LOCATED IN: LOS ANGELES, CALIFORNIA • CLARKSDALE, MISSISSIPPI
BELLEVILLE, ONTARIO

Brick & Clay Record

March, 1959 Vol. 134, No. 3

5 SOUTH WABASH AVE.
CHICAGO 3. ILL.
FRanklin 2-6880

Established 1892.
now in 67th year.

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*Ceramic Engineering Staff.

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BRICK AND CLAY RECORD is indexed by Engineering Index, Inc.

A Bigger Budget For Pipe Promotion

The clay pipe industry over the past 15 years has made tremendous strides forward. With the organization of NCPMI and the research program the industry has steadily been transformed from a struggling industry to one well-organized, consolidated, ready to move forward.

The industry has done a better job than it realizes on codes, public relations, promotion and advertising. Research has contributed greatly by development of longer, stronger pipe with foolproof joints.

Here's how the industry has grown:

Year	Volume	Value
1937		$15,895,000
1939		18,296,000
(War Years)		
1947		42,984,000
1950		53,402,000
1953		61,117,000
1956	2,089,000 Tons	90,120,000
1957		80,000,000*
1958		90,000,000*

*Estimated

This leads to a step that the industry must take before it can consider itself a leader, and that is to exhibit "faith and pride" in the industry itself and its products. Till this time, there has been some wavering of faith and pride.

There's no need for this wavering. The industry has the best product for the purpose; a product backed by centuries of proven success. The industry should have faith in its products and future. All the industry really needs is to keep ahead of the parade with its research, and back its faith and pride with good advertising and promotion.

Clay pipe's competition has at times seized the initiative, putting clay pipe on the defensive. Clay pipe must not only now stay on the offensive but undertake a stronger offense with larger sums for advertising and promotion. Proper advertising and promotion will help command sound prices for the product, help increase volume, truly pay for itself.

In the March, 1951 issue, we advocated that the industry spend up to 40c a ton for research, advertising, promotion and public relations. The industry actually has increased its contribution from a low point of 8c a ton in 1944 to 14c a ton at present.

But, in view of inflation and other factors, this is not adequate in today's market, or in tomorrow's market. It's discouraging to

Continued on next page

NEWS OF THE INDUSTRY

Kaiser, Mexico Agree on Merger

Kaiser Aluminum & Chemical Corp. and Mexico Refractories Co. of Mexico, Missouri, announced March 5 that they have reached agreement on the terms of a merger.

Subject to ratification by the stockholders of both companies, Mexico Refractories will merge into Kaiser Aluminum, and will operate as a division in conjunction with the Kaiser Chemicals Division, in the production and sales of refractory products for high temperature industrial application.

The merger agreement has been approved by the boards of directors of both companies and will be submitted to stockholders for approval in the near future, according to a joint announcement by D. A. Rhoades, vice president and general manager of Kaiser Aluminum, and J. B. Arthur, chairman of the board of Mexico Refractories Company.

Under the agreement, stockholders of Mexico Refractories will receive 300,000 shares of Kaiser Aluminum common stock and 150,000 shares of a new series of $100 par value 4-3/4 per cent convertible preference stock. One share of the preference stock is convertible initially into two shares of common stock. Mexico has 861,865 shares of common stock outstanding.

The combined operations will place the corporation among the nation's most diversified refractory producers with 9 plants and 27 sales offices strategically located throughout the country. In 1958, combined sales amounted to over $33 million.

The refractory products of the two companies are complementary. Kaiser Chemicals supplies throughout the country basic refractories, made primarily from magnesia grains, to the steel, glass, cement, and copper industries. Mexico supplies fire clay, silica and alumina refractories and a wide variety of specialty products to these same industries, as well as to other major industries, including the aluminum, lime, ceramic, oil, and chemical industries.

Mexico Refractories commenced operations at Mexico, Missouri, in 1930 and has expanded its operations several times. In addition, it has acquired plants at Van Dyke, Pennsylvania; Frostburg, Maryland; and Niles, Ohio. It also operates a Canadian plant under the name of Refractories Engineering & Supplies Limited at Bronte, Ontario.

Mexico's estimated net sales for 1958 amounted to approximately $17,000,000 with net earnings of more than $1,700,000. The company markets its products through a chain of sales offices, five company sales affiliates, and over 200 distributors and dealers located throughout the United States. Sales offices and distributors are also located in 29 foreign countries.

Kaiser Chemicals Division entered the basic refractories industry over 15 years ago, and is an integrated operation with three plants in the Salinas-Moss Landing area in California, and a basic refractory plant at Columbiana, Ohio, which was constructed about three years ago. The California seawater magnesia facilities were expanded in 1957 and the Columbiana plant is now being enlarged for the second time to meet the increased demand for basic refractories.

A. P. Green Acquires Climax Fire Brick

William S. Lowe, President of the A. P. Green Fire Brick Co. and Harry C. Barrand, President of The Climax Fire Brick Co., have announced that by an exchange of common stock the Green company has acquired Climax Fire Brick, of Climax, Pa.

Climax Fire Brick produces Pennsylvania type of fire-clay refractories, including Bessemer tuyeres, rider tile, open hearth checkers, cupola blocks, and a small production of high and medium duty fire-clay brick.

The products of Climax are different than those produced in the other Green plants, including the main plant at Mexico, Missouri. This acquisition continues the Green Company's policy of rounding out and having available a complete line of refractory products to meet the demands of all types of industry in all sections of the country.

No changes in the operating staff of Climax will be made and they will continue to produce their present line of products.

It is expected the sale of Climax products will add approximately 2.50% to the Green Company's annual consolidated sales.

PIPE PROMOTION EDITORIAL Continued

us to hear the NCPMI advertising committee argue a point where present advertising programs must be curtailed to make room for new ones. For instance, recently a consumer program was begun at the expense of the previous trade program.

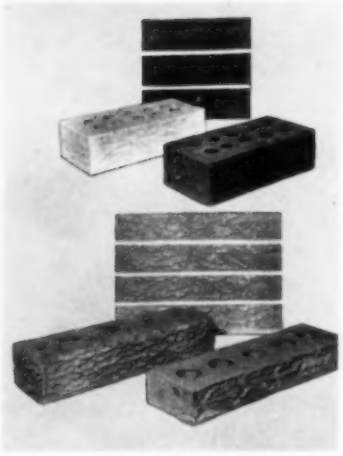
Why didn't we have the attitude of holding our present program and adding to it to reach more customers, rather than an attitude of curtailment?

In another industry, the container glass group, exactly this was done. When their program of Life magazine advertising was begun, it was added to their previous budget of $1 million, so their new budget was increased to $1.5 million, with no curtailment of previous effort. (This industry does a business of $600 million annually.) To match their spending in proportion, the pipe industry should have $250,000 annually for advertising and promotion.

The glass container industry, by their action, demonstrated faith and pride in their industry and product.

The clay pipe industry is now ready for a similar step, the third one in its program of progress. The first big step was formation of NCPMI; the second was the organization of research. We now must move forward in advertising and promotion, to show our faith and pride.

The Editors



Robinson Makes New Face Brick

The new face brick pictured is being made in various shades of buff and red, in two textures, bark and vine, by Robinson Clay Product Co., Akron, Ohio.

The upper group is standard brick, in bark textures, with the lower group (at left) a norman with bark texture and roman (right) in vine.

Shenango Gets Contract For Missile Cones

Shenango Refractories has announced that they've been awarded a U. S. Navy contract for production of a nose cone for the Navy Sparrow III missile.

The New Castle, Pa., firm will work on the nose cone of the 12′ long, 8″ diameter missile which is designed to travel at several times the speed of sound. The missile is launched from a jet plant and utilizes a unique wide angle "radar target seeker" permitting the pilot to launch the missile from almost any approach angle and score a hit.

The nose cone, to be 18″ long, is made of a special high alumina refractory composition which will be manufactured to extremely close tolerances.

The Shenango contract, according to the announcement by Howard B. Cummings, vice president in charge of manufacturing, calls for the development of manufacturing techniques which will reduce the cost of production and enable the mass producing of the cones. Work will be carried out as a joint effort of Shenango China, parent firm, and Shenango Refractories.

Temple Named Pres. At Denver Brick & Pipe

William G. Temple has been elected president of Denver Brick & Pipe Co. by the firm's board of directors. He succeeds William J. Geddes, president of the company since 1924.

Geddes was named chairman of the board at the same meeting. Other officers include George Doering, vice president; Kevin Croke, secretary; Guy Blue, pipe sales manager; Dan DeGeorge, brick sales manager.

Austin Appointed SM for Gem Clay Forming

John L. Austin has been appointed sales manager for Gem Clay Forming, Inc., Sebring, Ohio, according to an announcement by Gem President Harrison Keller.

Austin is a former vice president of Keagler-Austin Co. of Pittsburgh. He also has worked for Robinson Clay Products Co. of Akron.

Amvit Sales Reach All-Time High

"After a short-lived setback, American Vitrified Products Co., Cleveland, one of the nation's largest producers of clay and concrete pipe, is heading for new prosperity," E. L. Miller, President, reported to stockholders.

Sales and earnings have bounced back sharply after a short period of slight depression caused by a cut in industrial sales and a streak of exceptionally bad weather for construction throughout the country.

Company sales for the year ending October 31st, 1958, were $11,713,375, against $10,300,656 for the preceding year.

Bruno New President of Guignard Brick

L. V. Bruno has been elected president of Guignard Brick Works, of West Columbia, S. C., at a recent directors meeting. James Taylor was named vice president. Taylor had been Guignard sales manager for the past two years, while Bruno had been vice president and general manager for the last three years.

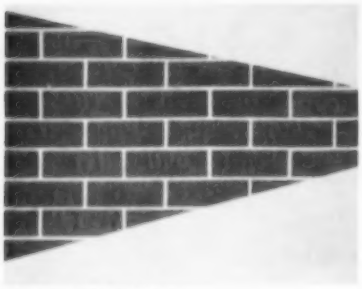
Harry Spaulding Dies

Harry M. Spaulding, 70, founder and chairman of the board of Spaulding Brick Co., Boston, died Jan. 23. He was in the construction industry for 50 years and was a director and past president of NADD.

Natco People At Eastern Sales Meeting

A recent Eastern district sales meeting of Natco Corp., Pittsburgh, was held in the New York Athletic Club, New York City. All the men in the above photo are Natco representatives, salesmen, branch managers or general office. Pres. Roy Shipley is at extreme left.

NEWS OF THE INDUSTRY



Adel Adds New Velour Wire Cut

A new texture, Velour Wire Cut, has been added to the line of Adel Clay Products Co., with factories in Redfield and Centerville, Iowa.

The new texture is said to be specially developed to meet the demand for a soft red blend with velour wire cut surface for both interior and exterior use.

Kaiser Expands Columbiana; Second Time in 3 Years

Kaiser Chemicals is expanding its basic refractory brick capacity at its Columbiana, Ohio plant for the second time in three years.

Frank M. Cashin, vice president and general manager of the Kaiser Chemicals Div., Kaiser Aluminum & Chemical Corp., said the expansion is a result of increased demand in the Eastern and Midwestern markets for the Division's products. The project will cost about three quarters of a million dollars.

"These additional facilities will give us the capacity to produce a greater volume and variety of products to satisfy the rising demand for basic refractories, particularly for use in the all-basic open hearth steel furnace," Cashin said.

Included in the expansion are additional 750-ton presses for forming brick and auxiliary materials handling equipment. Also new raw materials storage capacity will be constructed as well as an additional tunnel brick drier.

When the expansion is completed late in 1959, Kaiser Chemicals will have the annual capacity to produce a combined total of over 200,000 tons of basic refractory brick and mixes at its Moss Landing, Calif. and Columbiana facilities.

Fobes New SM For Mason City

Vernon H. Fobes has been promoted to sales manager of the Mason City (Ia.) Brick & Tile Co.

Canada BTMA Elects McGolpin President

William C. McGolpin was elected president of the Brick and Tile Mfrs. Assoc. of Canada at the 17th annual meeting, in Toronto on Feb. 11. J. W. Akam was elected vice president.

Cooksville-Laprairie Adds Two Tunnels

The large-scale expansion program of the recent unification of Cooksville-Laprairie Brick Ltd. will include two new tunnel kilns for a total cost of near $4 million.

The larger of the two projects is at Cooksville, where complete new buildings to accommodate the plant are to be built at a cost of between $2 million and $2.5 million. The Cooksville kiln will be 400′ long, 10 brick wide, fired by natural gas. Swindell-Dressler has been given the contract for construction at both plants of the kilns.

The Laprairie kiln is being housed in a building which now has a tunnel built in 1957, with cost estimated overall at $1.5 million.

The Laprairie tunnel is expected to be in operation in spring, with completion at Cooksville expected in August. Production at Cooksville will be wire-cut method, and at Laprairie will be dry press. Laprairie will fire with oil instead of gas.

Booth, Coffey, Hughes Elected by BTI-Ont.

From left, Booth, Coffey, Hughes

At the second annual meeting of the Brick & Tile Institute of Ontario W. D. Booth, of Booth Brick Ltd., was elected president. At the meeting, held at the Westbury Hotel, Toronto, 29 January 59, J. J. Coffey of Cooksville-Laprairie Brick Ltd. was elected vice president; F. A. Hughes, of Sharp, Milne & Co. Ltd. was elected secretary-treasurer.

Following the annual meeting, one hundred people representing the combined sales staffs of the member companies attended a dinner at the Westbury.

Guest speaker of the evening was C. C. Hoffman, known as "Canada's Super Salesman" who talked on "It's the Attitude that Counts".

Two major programs were presented to the sales personnel by Hugh C. MacDonald, General Manager of the Institute.

This year the Institute is undertaking to construct the Model Home at the National Home Show—April 3-11 and MacDonald outlined the plans for this house and the Institute booth and asked the sales personnel for the same excellent co-operation which has been received by the Institute in past home shows.

The Best Costs Less

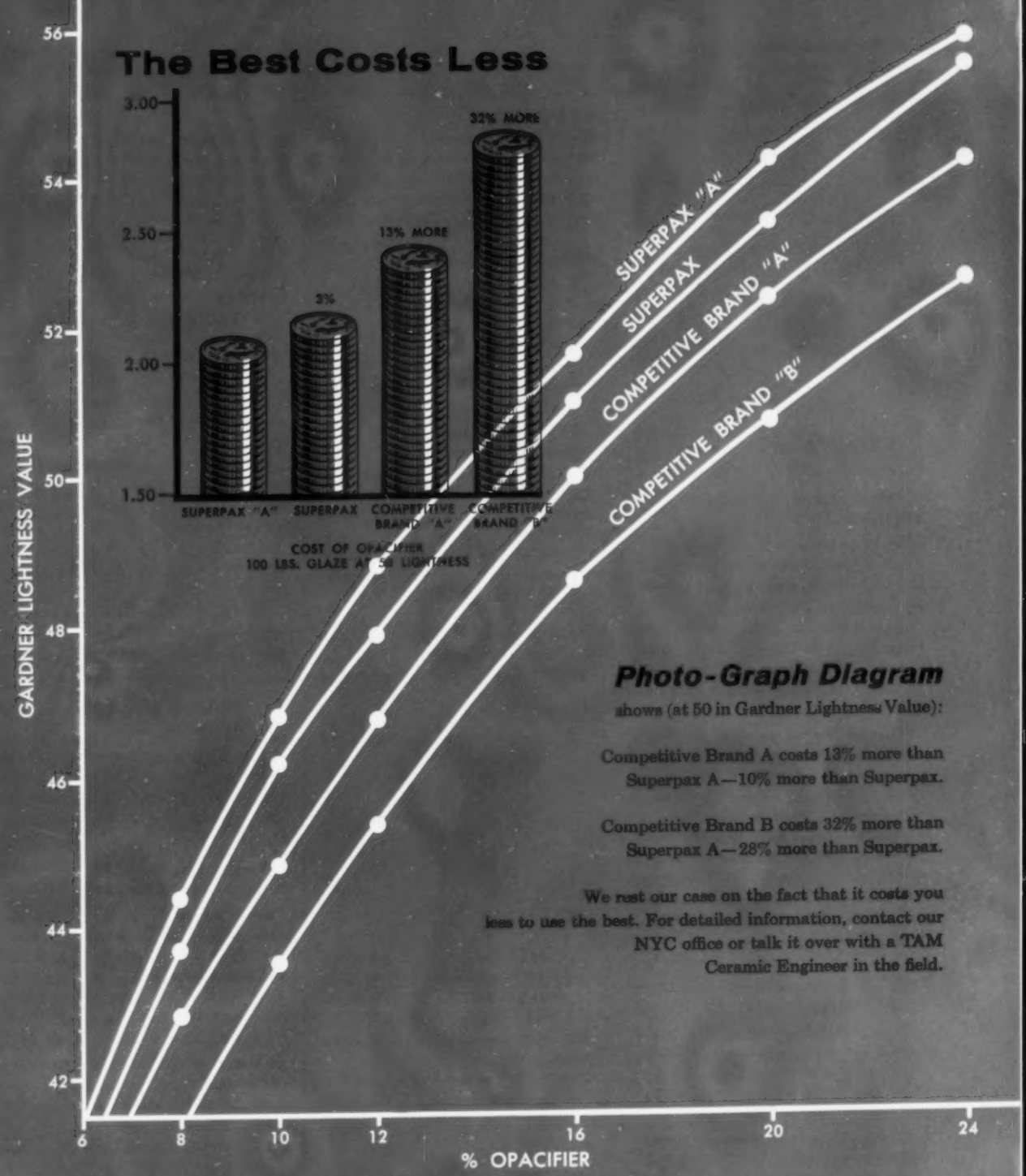


Photo-Graph Diagram

shows (at 50 in Gardner Lightness Value):

Competitive Brand A costs 13% more than Superpax A—10% more than Superpax.

Competitive Brand B costs 32% more than Superpax A—28% more than Superpax.

We rest our case on the fact that it costs you less to use the best. For detailed information, contact our NYC office or talk it over with a TAM Ceramic Engineer in the field.

ZIRCON OPACIFIER %
VS.
TINTING STRENGTH
GREY WALL TILE GLAZE
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CONE 3

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DIVISION NATIONAL LEAD COMPANY

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General Offices, Works and Research Laboratories: Niagara Falls, N. Y.

NEWS OF THE INDUSTRY

A. G. Cochran Re-Named President By CSPA

Member manufacturers of the Clay Sewer Pipe Association, Columbus, Ohio, have re-elected A. G. Cochran of Columbus, president.

August Larson of the Larson Clay Pipe Co., Uhrichsville, Ohio, was named vice president; and Mrs. Reva D. Smart of Columbus, was re-elected secretary-treasurer.

Trustees elected to serve in 1959 are T. E. Duffy, the Stillwater Clay Products Co., Cleveland; Thomas J. Evans, III, the Evans Pipe Co., Uhrichsville; Hudson Hillyer, the Clay City Pipe Co., Uhrichsville; Barton A. Holl, the Logan Clay Products Co., Logan; E. W. McClave, Superior Clay Corp., Uhrichsville; and W. E. Robinson, the Robinson Clay Product Co., Akron.

"Higher Temperatures To Aid Refractories"

The necessity for intense temperatures in space age manufacturing will prove a boon to the refractories industry, says The Milwaukee Co. in its February report to investors.

"A greater volume and variety of refractory materials will be required in the construction of supersonic aircraft, rockets, missile launching pads, automation equipment and other atomic age products," the report says. It terms the refractories "the cinderella industry."

Atomic energy power plants will also open up a steady new growth market for the refractories, according to the investment firm. It says the nation's total output of refractory materials should increase 50% by 1967 to reach 15 million tons. Production in 1957 was 10 million tons.

Solite Appoints Ford

A. Cabell Ford, Jr., has been appointed sales representative for the new Raleigh, N. C., office of Carolina Solite Corp.

Former Brick Man Franke Named Secty. of Navy

William B. Franke, former board chairman of General Shale Products Corp., has been elevated from Under-Secretary to Secretary of the Navy. Franke succeeded Thomas S. Gates Jr., who has resigned.

Frank served as GS board chairman from 1946 to 1956, resigning from the board in 1957.

G,McB Names Daugherty Pipe Products SM

Charles J. Daugherty has been appointed to Southern California area sales manager for the pipe products division of Gladding, McBean & Co., it has been announced by Addison Hawley, general manager.

Daugherty has been a salesman for the refractories division of the company since 1947.

Basic's 4th Period Net Above Year Ago

Fourth quarter sales and net profit of Basic Incorporated, Cleveland, in 1958 were $6,023,516 and $572,636 respectively as compared with fourth quarter 1957 figures of $5,279,978 and $131,159.

For all of 1958 the company reports sales of $19,576,206 and net of $1,102,281 equal to $1.30 per common share outstanding, as compared with 1957 sales of $23,723,198 and net of $1,397,572 equal to $1.72 per common share.

New NADD Members, Chapters Formed

New members of NADD include Diener Brick Co., Collingswood, N. J.; Huston Clay Products Co., Willow Grove, Pa.; Industrial Materials Co., Philadelphia; O. W. Ketchum, Philadelphia; Alex Bremmer Ltd., Montreal.

The first four members above are among those in a newly formed Philadelphia-Delaware Valley local NADD chapter, with other members including Arthur A. Squier, Robert F. Ingham Assoc., Gerlach & Moranz Brick Co.

NADD director Henri Bastien reports that establishment of a Montreal chapter is "imminent."

SBT To Meet May 22-23 At Sea Island, Ga.

The 17th annual meeting of the Southern Brick & Tile Mfrs. Assoc. will be held at Sea Island, Ga., at the Cloisters, on May 22-23.

G,McB Receives Nuclear Fuel Contract

Gladding, McBean & Co. has announced receipt of a $50,500 contract from the Atomic Energy Commission for research and development work relating to ceramic fuel elements for atomic reactors.

Gladding, McBean recently has announced receipt of classified contracts involving the production of radomes (nose cones for guided missiles) for the Air Force and the Navy.

In addition, the company has developed a variety of specialized ceramic products including zirconia rocket nozzles, alumina beacon windows or antennae, diode holders, heat and nuclear radiation resistant electrical connectors, solar furnace parts, oil well flow beams, fire detector switch covers for aircraft use and suspension mounts for vacuum liquid oxygen containers.

Dickey Makes Four Sales Appointments

Four new sales personnel appointments have been made by W. S. Dickey Clay Mfg. Co., Kansas City.

Lewis R. Clyne has been appointed sales rep. in the Kansas territory,

Top, Clyne, Taber.
Bottom, Collins, Fields.

working out of the Kansas City office. He replaces Earl Taber who now will be in the Eastern Missouri territory, working from the St. Louis office. Norman Collins has been added to the engineering staff of the KC branch office. Collins replaces Ernest Fields, who goes to the sales engineering division of the St. Louis branch office.

PacClay Sales At All-Time High

Pacific Clay Products net sales for the fiscal year ended December 31, 1958 were the highest recorded in the company's history, President John D. Fredericks has announced in the annual report to shareholders.

Net sales for 1958 amounted to $10,138,890 as compared with $8,922,686 for 1957. Fredericks stated the gain in sales was achieved despite the longest storm and rain stretch ever recorded in the company's marketing area which sharply curtailed installations of vitrified clay pipe sewage lines due to unsuitable ground conditions.

Earnings of the company were reported on two different depletion allowance bases.

On the basis of depletion allowed by the Internal Revenue Service to date, net income after all charges amounted to $1,143,677 in 1958. This was equal to $2.21 per share on the 516,452 shares of capital stock outstanding on December 31, 1958. In 1957, net income was $1,301,739 or $2.52 per share on the 516,374 shares outstanding at the close of that year.

The report stated that in 1958, a court decision was rendered on the company's claim for refunds of Federal income taxes for the years 1951 and 1952 based on increased depletion deductions on clay mined. This decision has been appealed by the Federal Government in which appeal the company has joined. It was stated that in the opinion of Pacific Clay's tax counsel, the amounts that will be ultimately refunded and reductions of taxes otherwise payable for the years 1951 through 1958 would approximate $1,600,000, with approximately $300,000 applicable to 1958 and $330,000 to 1957.

Reflecting the benefit of the increased depletion allowance, per share earnings would be $2.80 for 1958 as compared with $3.16 for 1957.

GLAZE OR ENGOBE

Which method are you using?

Ferro can work with you to set up techniques, processes and quality controls for either glazing or engobe . . . or for other brick coloring methods: body stains and sandblasting.

Ferro inorganic colors—developed from long experience in all kinds of brickmaking—retain color uniformity and light and heat stability through ton after ton of the brick you make.

Write today, describing your equipment, firing ranges, type of clay and proposed method of applying color.

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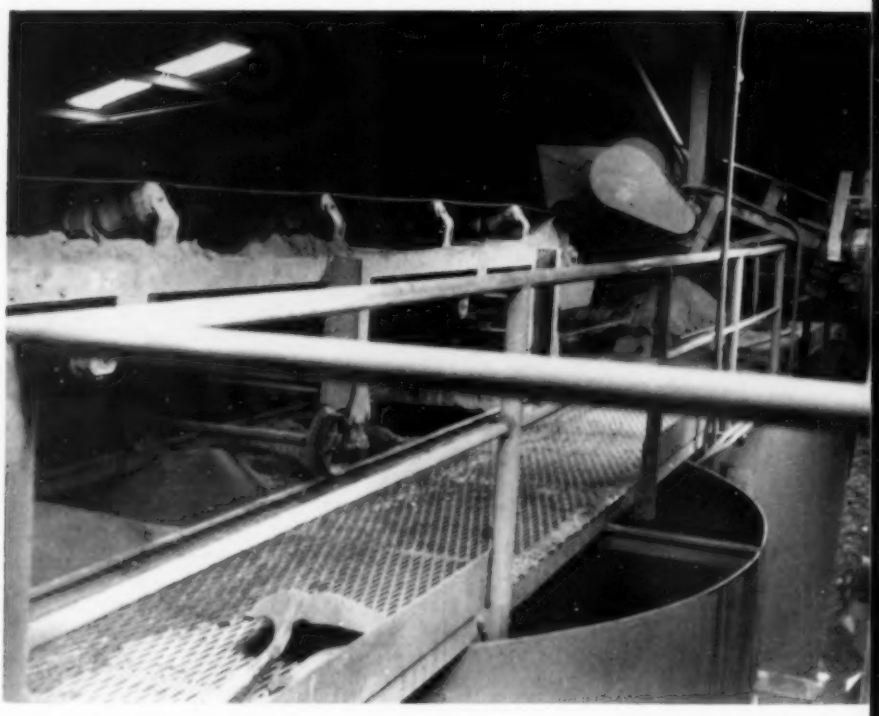
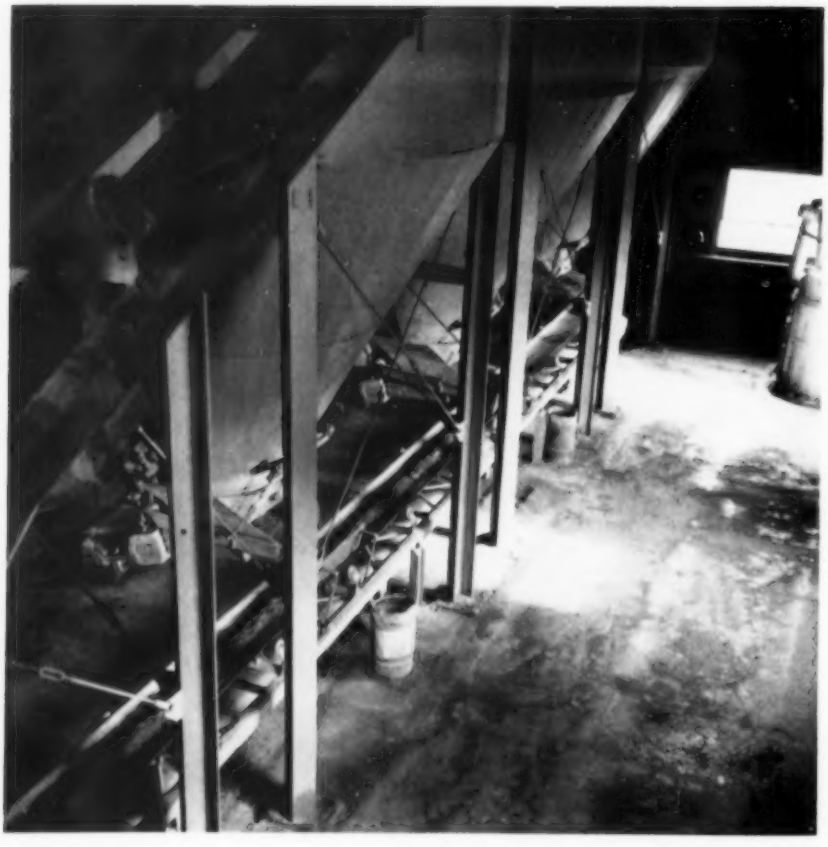
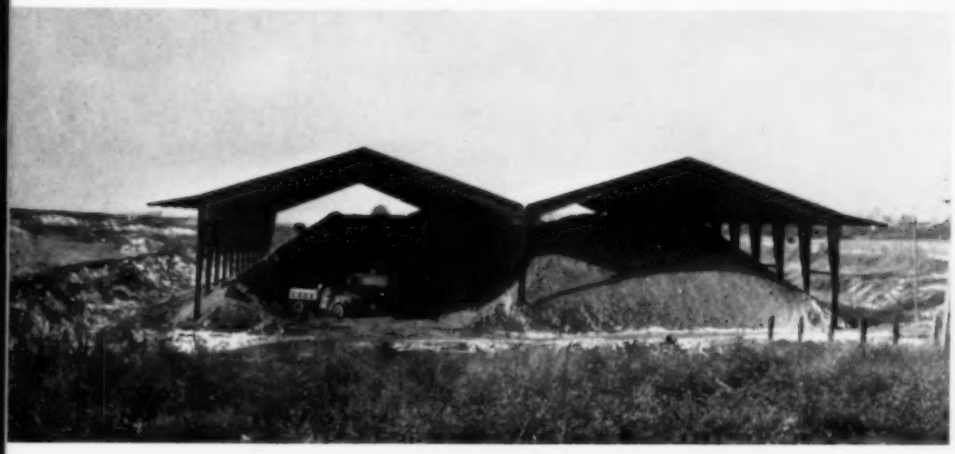
Foreign plants in Argentina, Australia, Brazil, Chile, England, France, Holland, Japan, Mexico, South Africa.





New bin storage facilities are shown below, with top view at right. Each bin holds 100 tons of clay; moves on three belt system from bin to pugger.



One of two new buildings is this one for raw clay storage.

New Grinding Set-up Boosts Production, Product Quality

Eastern Illinois Clay revamps pit operation, grinding, adds storage capacity for better drain tile operation.

Increased production and improvement of product have been counted among the advantages resulting from remodeling of the pit and grinding section of the St. Anne plant of the Eastern Illinois Clay Products Co. Built in 1917, the plant has been one of Illinois' major producers of structural tile and drain tile.

In common with other plants in the region making tile, Eastern Illinois uses surface clays as raw material. These clays are generally handled with smooth and conical rolls and placed into the pug mill without preliminary drying. In their natural condition, especially during the winter, they are very wet, tend to stick and carry a considerable proportion of stones and other foreign material difficult to reduce to small sizes. Smooth roll clearance is critical and constant dressing is required to maintain the rolls.

Grinding Remodeled, Storage Added

Since Eastern Illinois was using almost 200 tons of such clay a day and roll capacity was barely sufficient, the management decided to make radical changes in the grinding division and at the same time add storage capacity to eliminate the problems of the mill room during wet weather.

Two new buildings were built, one to house dry clay as won from the pit and the other to contain ground clay storage bins and screens which were not used with the smooth rolls. The larger building for raw clay storage is 240 x 140 feet.

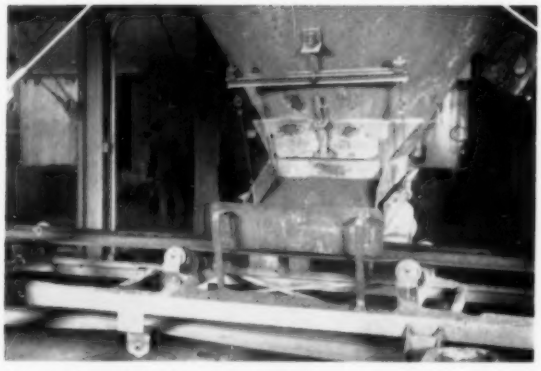
Two bays were provided, each with a clear span of 70 feet, and the roof deck was extended some 16 feet, eight on either side so that the roof covers 156 feet. The clay pit had been worked with a 1½ yard shovel and trucks and, in the new operation, the same equipment is used to move clay from the storage shed to the clay hoist.

But the clay is now taken from the pit with a Woodridge scraper and piled into the clay shed. A vertical clearance of 42 feet is available in the shed but since the scraper requires almost ten feet of this only 32 feet is available for clay storage. The 12 ton capacity scraper is self loading, but in practice the last half of the bowl is filled with the help of a D-7 tractor. The run from pit to shed is ⅝ths of a mile and the scraper enters the shed from one end, spreads the clay, and then turns on top of the pile and leaves the shed from the same direction that it entered.

The pit is worked only when the clay is dry and in the Illinois area this means from the first of May until sometime in November. Immediately following rains during this period the clay is too wet to work. By dumping all clay won from the pit into the storage shed and feeding the plant from stock piles, the natural variations of the clay bank are averaged out and the manufacturing

(Continued on next page)

Detail view of belt system



Here's how bins feed onto belts leading to pugging area.

EASTERN ILLINOIS Continued

departments are able to work with clay of constant properties.

When the shed is full, the plant has some 36,000 tons of dry clay ready for use in the grinding plant. After loading, the side dumping clay car on the hoist is dumped into a Telsmith apron feeder. This unit has a Reeves Vari-Drive with motorized controls and is operated by the hoist man.

The feeder dumps into a Chambers disintegrator which cuts the clay into small pieces and feeds into a set of corrugated conical rolls where the larger stones are separated from the clay and discarded. Material passing through the rock separator moves on a 24″ conveyor to a dry pan. This unit is a Chambers ten foot air loaded pan. Air for the loading cylinders is taken from the nearby shop air compressor.

Grinding Problem

Grinding of surface clays with a drypan presents problems in this area. If the clay is not reasonably dry, the slots become clogged rapidly and production through the pan either ceases or is drastically curtailed. In Eastern's operation, the clay is delivered in an apparently dry condition. As long as the dry condition prevails, the pan operates well. Discharge from the pan is moved on 24″ conveyor to two Tyler screens. Equipped with 11 mesh screens, 4 x 8′, they are heated and vibrated.

Fines are elevated with conveyors to the top of the bin building where a shuttle conveyor is used to place the material into ground clay storage bins. Each of the four steel bins used holds 100 tons of raw clay. When required for use in the mill room, the clay is taken from the bins and moved on a three belt system directly to the pugger. The pug mill operator controls the feeders so that clay can be taken from any one bin or combination of bins simultaneously. The bins have been equipped with Jeffrey vibratory feeders and each bin has a magnetic vibrator that operates continuously while the bin is being used.

Screens Help Quality

Using the 11 mesh screens, the grinding department is able to deliver a much higher quality of ground clay that was possible with the old methods. While the effect on quality was immediately noticeable in fired ware, production has actually been increased over the old rate.

Power demand charges are reduced by operating the grinding room only during the evening after the millroom has completed the day's production. With adequate storage, this flexible plan has proved to be entirely feasible and also results in better working conditions for the mill room gang during the day. Two and sometimes three men are assigned to the grinding department with production of 200 tons taking less than nine hours.

Conveyors were built to use 24″ belts with Stephens-Adamson component parts, including self-aligning belt guides. In line with modern practice the entire grinding plant is electrically interlocked so that pile ups are prevented.

The balance of the plant reflects the progressive maintenance policies of the Company as well as continued modernization over the years. Two mill rooms are used alternately depending on product being made. Machinery used for drain tile include a Bonnot "Viking" combina-

(*Continued on page 59*)

LONG OR SHORT HAUL. Barber-Greene Permanent Conveyors are available for every handling requirement. Write for 192-page catalog.

Move material faster – at lowest cost with Barber-Greene Belt Conveyors

Built of standardized components, Barber-Greene Permanent Conveyors are delivered and erected faster. They give top performance, yet require less engineering, and they are easily altered to meet changing or expanding requirements. Standardization also means readily available spare parts.

Barber-Greene Portable Conveyors handle all bulk materials. Pneumatic tires give fast travel between jobs. Swivel wheels allow building of high-capacity radial stockpiles. Line shaft and gear reducer drives eliminate troublesome chains and sprockets. Rugged construction assures long life and low maintenance. Lengths to 60 feet or more. Complete line of accessories.

FASTEST UNLOADING AND STOCKPILING. Barber-Greene Portable Conveyors and Car Unloaders provide fastest, most economical method of unloading hopper cars to stockpile and trucks.

58.16 POE

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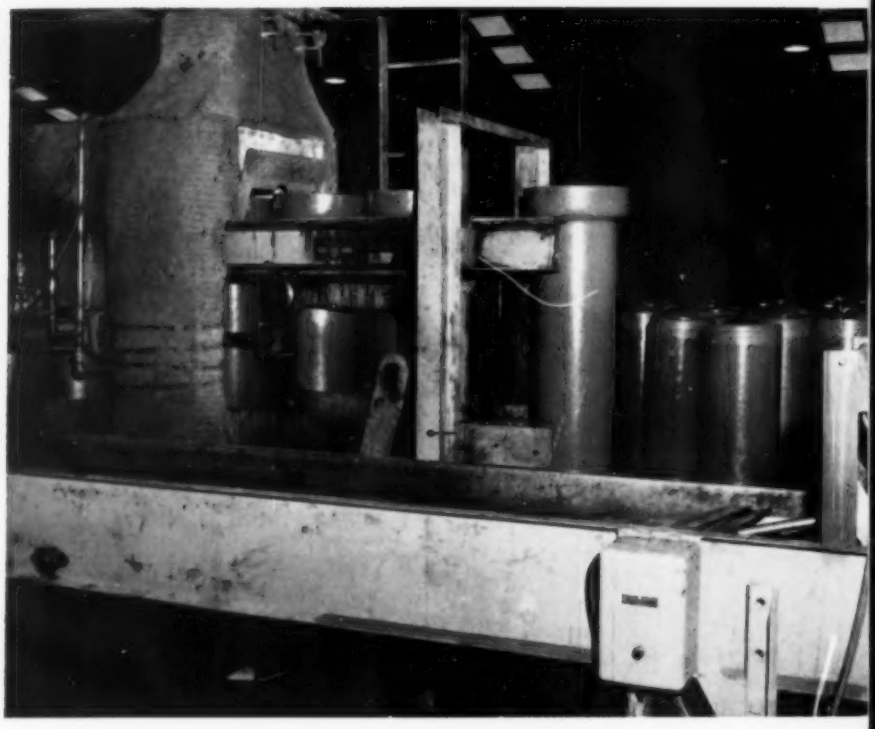
AURORA, ILLINOIS, U.S.A.

CONVEYORS . . . LOADERS . . . DITCHERS . . . ASPHALT PAVING EQUIPMENT



Pipe at right enter pre-heating section for 25 minute period.

To eliminate batch method problems, to save manpower, W. S. Dickey engineers worked out this method for:

Continuous Pouring of Pipe Joints

Continuous forming and curing of polyvinyl chloride joints on 8″ sewer pipe is one of the latest developments at the Pittsburg, Kans., plant of W. S. Dickey Clay Mfg. Co.

Engineered by the company's own personnel, the new PVC seal line eliminates problems associated with batch operations and points the way to more effective production of one of the industry's newest developments.

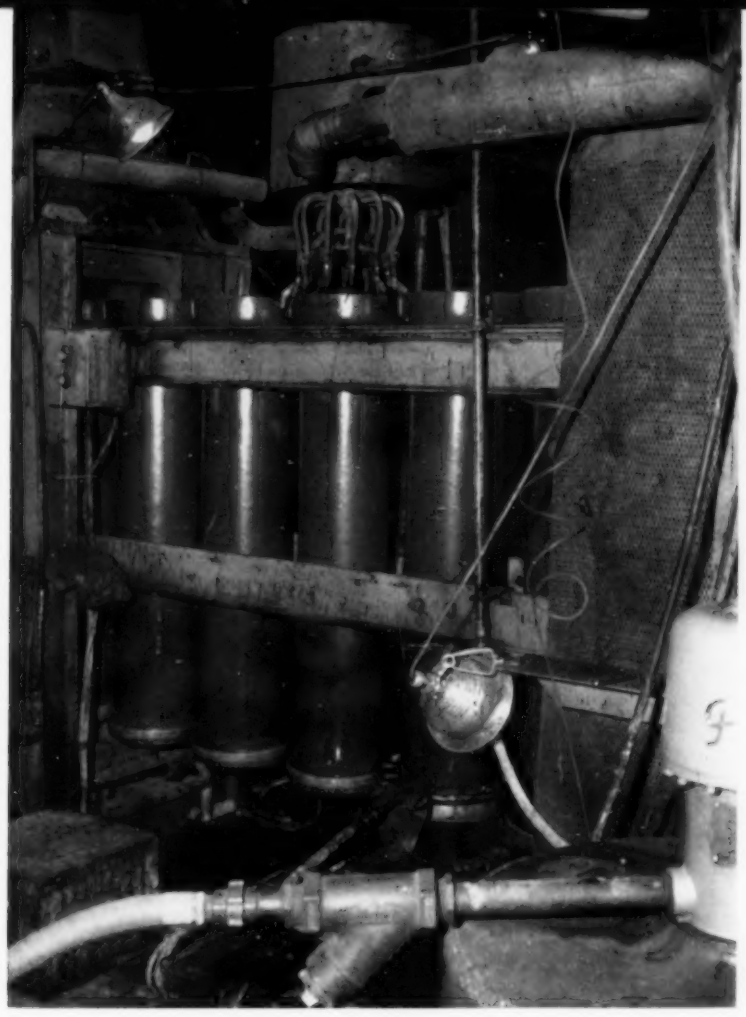
The line has been set up in the same building as the new forming machines (Ed. Note: see April 1958 issue, page 70, for another story on this plant) and the 450′ Allied tunnel kiln recently put into operation.

By this close location extra handling is eliminated, since the tunnel was designed specifically for the firing of 8″ pipe with all the pipe removed from the kiln cars and placed in the PVC line directly. Since the tunnel does not deliver any other pipe size, the PVC line is reserved for fresh pipe coming right from the kiln.

Fresh pipe are required for the PVC process as weather exposed pipe can cause failures in adhesion. After removal from the kiln, the loaded kiln cars are moved to the line, the pipe inspected and unloaded from the cars.

The seal machine operates automatically, requiring only loading and unloading. Pipe pass through the machine upright in a continuous motion. One man loads one piece of pipe every minute into the front end of the machine after placing a template that both supports the pipe and controls air flow.

Molds are placed on the bell and spigot ends where they are held with a spring attached to the center of



Pre-heating at left, tempering at right; pipe at center are being poured by spider.

each mold and running through the pipe.

The pre-heat section of the furnace has two heating shrouds. One shroud covers the spigot end, with the circulation of pre-heating air controlled by the templates that fit around the pipe.

The heat input is adjusted so that the ends of the pipe reach proper pouring temperature in 25 minutes, or by the time the pipe reach the center of the line.

On reaching the center of the line, the pipe move from the pre-heating shrouds and the PVC joints are poured. While serviced by one man, the actual pouring is done by the machine. The pouring spiders, one for the bell and one for the spigot, are moved to the pipe with air cylinders. Then a measured amount of raw plastic is poured into the mold.

Pouring spiders are then retracted and the pipe continues through the line for curing. The pouring position is equipped with a suction system to remove all of the fumes from the work area.

Drums of the seal material are placed close to the work area, with the machine removing the contents as needed. Since the pouring spiders remain close to the line with the pour done in a precise, closely-measured manner, little material is wasted and the area is free from spilled plastic.

The curing portion of the line is similar to the pre-heating portion. In this section, however, the temperature is held at the curing point for the entire length of the section. After some 25-30 minutes in the curing part, the pipe are ejected from the shroud for unloading from the machine and for the mold removal.

Two men are assigned to the unloading section to take pipe from the line, place them on a working rack, and remove molds. Molds and templates are placed on a conveyor which moves them to the head end of the machine.

(*Continued on next page*)

DICKEY Continued

The unloaders remove the flashings from the seals, inspect the finished joint and roll the pipe to the end of the working rack. When 6 or 7 pipe have been accumulated, the pipe are removed from the rack and placed in a strapping jig for strapping.

The PVC line was developed by the Dickey engineering division and is protected by patents.

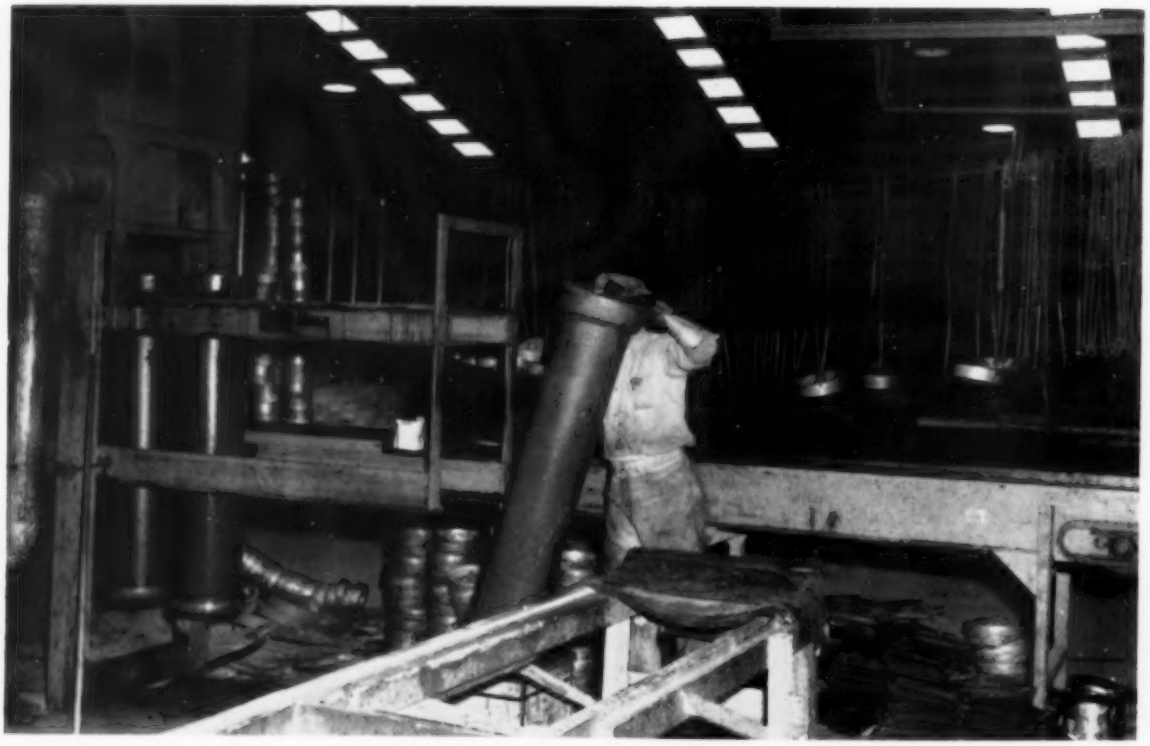
Wendal Johnson is the mechanical engineer in this department, with other department men Frank De Gasperi and Roland Holmes, all working under the supervision of the Dickey director of research, E. R. Ligon.

Four men and one foreman are assigned to the automatic jointing machine on each shift that it's operated. Pipe also must be moved to and from the line. Finished pipe are fork-trucked to outside storage or placed on trucks for immediate shipment.

According to plant superintendent P. B. Friley, the system has proved to be highly productive, economical in operation for both labor and material.

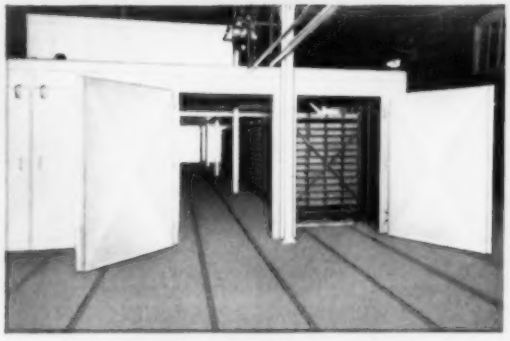
Pipe are then removed, sent to strapping jig.

Pipe here are trimmed, inspected and sent to working rack.



HEAVY CLAY DRYERS

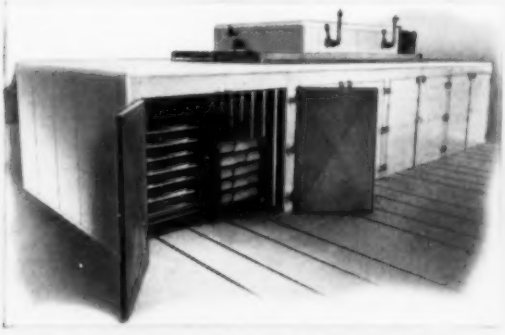
...the product and problem dictate the design



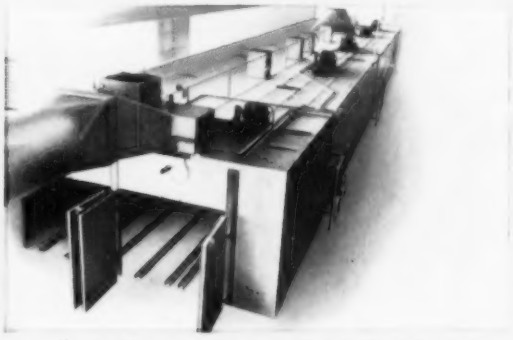
Car Type Humidity Controlled Fire Brick Dryer.

The LANLY Company's geographical location is near the heart of the country's clay products producing area. This has contributed to their 20 year acquisition of the essential knowledge and experience required to design and build the finest in heat processing equipment for the exacting varied applications in the industry.

Unprecedented competition, coupled with ever increasing costs has made it mandatory for clay products manufacturers to strengthen their relative positions in the field through the replacement of outmoded dryers. This has been accomplished in a large measure by their coordinated action with the LANLY organization.



Rack Type Humidity Controlled Refractory Dryer.



Progressive Type Humidity Controlled Quarry Tile Dryer.

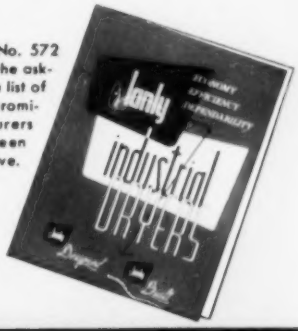
Find Your Representative In The Yellow Pages

THE lanly CO.

CERAMIC OVENS & DRYERS

2800 Euclid Avenue • Cleveland 15, Ohio

LANLY Bulletin No. 572 is available for the asking. It contains a list of some of the prominent manufacturers LANLY has been privileged to serve.



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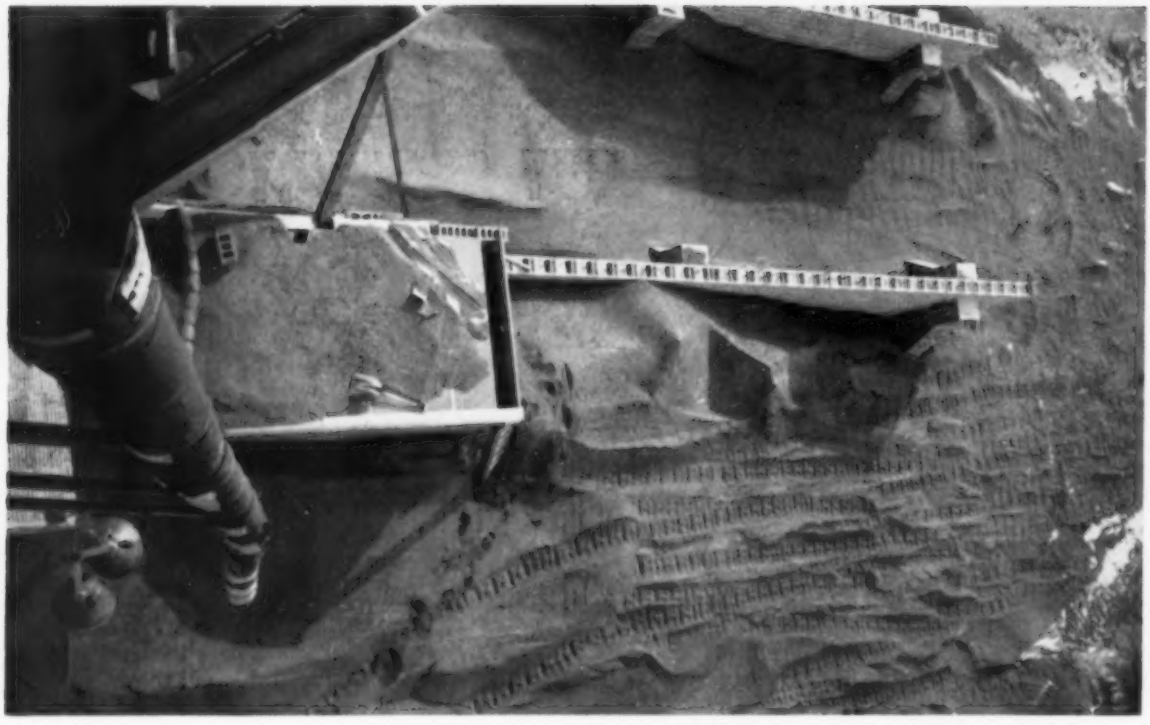


Overhead view looking down into loading and bin area at Acolite plant. Two bins are used.

Year Old, Two Kiln Acolite Plant Plans To Add Two More Rotaries

Operation shares clay winning facilities of Ochs Brick & Tile; 350 yards a day made by 16 men on 24-hour operation.

Two rotaries are used; plant plans third.

A two-rotary kiln plant that can easily be expanded to a four-kiln operation has been producing lightweight aggregate since last May for Acolite, Inc., of Springfield, Minn.

The plant is owned 50% by Ochs Brick & Tile Corp., of Springfield but is run as a separate corporation. The other 50% is owned by Dakota Lime & Brick Co., of Rapid City, S. D.

The plant began production with one rotary kiln, using clay from the Och's pit which is just across the road from the aggregate plant. Clay is won by a shale planer and trucked into the Acolite site.

Overall view of firing area at plant; storage area is at front.

Clay is dumped then behind a grizzly and moved by Sauerman 2 cu. yd. chain-pulled bucket to the grizzly, which was made by Acolite. Any oversize lumps are broken by hammer but, because of the use of the planer, the clay is pretty well sized as it comes from the pit. The grizzly removes any material over 4" in size.

To Bins, Kiln

The plant has added a second rotary kiln set-up just like the first one. For each kiln, there's a storage bin with feeder. The belt feeders and a bucket elevator feed clay into the rotary kilns through 15" pipe.

Firing temperatures run from 2300-2350 deg. F at the plant, with one kiln fired by a single self-inspirated burner and the other using a Maxon burner, both gas-fired.

The plant usually only operates during the period when gas is available, shutting down when gas is cut off since there's no standby. Any rings that should form in the kiln are shot out.

The fired clinker drops out of the kiln into a pit behind the firing shed with water added to cool and to control dust.

Final Crushing

Another Sauerman moves the clinker up to the crushing and screening operation. Primary crushing here is by an eccentric jaw crusher mounted under a grizzly outside the grinding building. Recirculation is used over screens until the proper sizes, 3/8" or less for block mix, is obtained. Any oversize material goes through a hammermill and then to storage. The plant uses two grinding set-ups, one for the block mix and the other for the structural mix.

An elevator moves screened material then to concrete block lined pits that have 4" square sliding doors in the bottom. Under these doors is the belt going to the delivery chutes.

About 95% of the daily output of 350 yards is shipped by rail, with aggregate weighing about 1575 lbs. to the yard. Sixteen men and a supervisor operate the plant on a 24-hour day schedule.

The Acolite plant has a third kiln on the grounds, for installation whenever desired and a fourth kiln can be added, but the latter is a few years away.

Elmer Apt is president of the Ochs company and of the Acolite, Inc., operation. Morlan Lee is Acolite superintendent.

Changes of Address

If you're due to change your address, be sure to avoid missing an issue of B&CR. Please notify us of your new address at least six weeks in advance of moving date. Write: BRICK & CLAY RECORD, 5 South Wabash Ave., Chicago 3, Ill. Be sure to give both old and new address, zone number, and your name.

A plant operator's manual on:

De-airing

Part II: Theory and practice to help plant operator understand, control the de-airing process.

By
J. George Seanor

Many plant operators do not have the slightest idea of how much air they remove from their clay when they use the vacuum process. To determine the Exact amount would be an elaborate project for a scientist or highly skilled technologist.

However, the volume of air per minute can be arrived at for practical purposes, if you have a vacuum machine.

Suppose that you are running 11,000 brick per hour; that you are using a 60 CFM pump; and that you get a vacuum reading of 27.5" when the actual barometer, at the machine level, is 30.00"; and that there are no leaks in the vacuum system. Then, using the above formula, and letting "y" designate the Cu. Ft. of air that you pump off the clay per minute, you would have the following:

$$\frac{2.5}{30} \times 60 = \text{"y"}.$$

Solving the above equation, "y" would be 5, and you would be pumping 5 Cu. Ft. of air from your clay per minute (including some water vapor). The 2.5" absolute pressure used above is the Barometer of 30" minus the vacuum gauge reading of 27.5

You can depend up this 5 Cu. Ft. of air per minute for practical purposes in plant engineering. (A scientist would modify it some by using a factor for pump efficiency, a factor for latitude, etc.)

Large Pump—Small Increase

Some argue that if you were to use a larger pump which would give a higher vacuum, you would draw a greater volume of air from your clay.

This may be true, but, if you do, the increase in volume is very small. It seems that after you have lowered the pressure at which you process your clay to around 5 pounds per square inch, or under, you get very little more air from the clay at still lower pressures.

This is why some highly rated scientists prefer to call it the "vacuum process" rather than the "deairing process".

Below 5 pounds per square inch very little, if any, more air comes out of the clay, but still lower pressures do have a profound effect upon the surface tension of the clay particles.

One scientist noted the surface tension condition of a porcelain ware clay that had passed through a deairing machine. Then by chemical means he prepared another batch of this clay so that it had identical surface tension characteristics. When this doctored batch was run through a non-deaired machine, the extruded clay was identical with the deaired clay.

At any rate, once you have determined the volume of air coming off your clay, by the formula, if you process at 5 pounds per square inch, or lower, you can depend upon it in determining the proper size of a larger pump, to process the clay at some pressure per square inch lower than you have been using.

Plant men frequently dislike algebraic equations. The same information can be obtained by arithmetic as follows:

To determine the volume of air you remove from your clay.

1. See that the machine is running at it's regular scheduled rate of production. If you normally run 11,000 brick per hour, note the vacuum reading on the vacuum gauge when actually running 11,000 per Hr.

2. Find out what the actual barometer is at the same level as the brick machine. If you do not have a barometer, there may be an airport, or weather station, near your plant. Ask them for the "actual barometer" and be sure that they do not give you the "barometer corrected to sea level".

For each 100′ that the brick machine is below the place from which you get the barometer reading, add .11" to the reading they give you; and for each 100′ that the brick machine is above their barometer, subtract .11" from their reading.

3. From the barometric reading at the machine level subtract the vacuum gauge reading on the vacuum chamber. The result is the "absolute pressure" inside the vacuum chamber.

4. Next, divide this "absolute pressure" by the barometer reading (from 2 above).

5. Then, from the catalog, or pump manufacturer, find out the CFM capacity of your pump in CFM.

6. Multiply the result obtained in (4) above by the CFM rating of the pump. The result is the **cubic feet of air** (plus water-vapor) **which you remove from the clay in the vacuum chamber,** per minute. **When the volume of air you pump from your clay has been ascertained, and you want to determine what vacuum you would get with pumps of different capacities, or cfm ratings.**

7. Multiply the Cu.Ft. of air that you pump per minute (6 above) by the actual barometer (2 above).

8. Divide result obtained in 7 above by the rated CFM capacity of the NEW pump that you propose to use. This will give you the "absolute pressure".

9. Subtract the "absolute pressure (8 above) from the actual barometer (2 above) and the result will be the vacuum at which you will process your clay with the new pump.

When you have the absolute pressure, to determine the pressure at which you are processing your clay.

10. Multiply the "absolute pressure" by 0.4912 or, if you cannot remember this decimal 0.4912, divide the absolute pressure by 30 and multiply the result by 14.7.

There really is no mystery in the vacuum problems on a heavy clay products plant if you get your teeth into it and quit depending upon a vacuum gauge reading only.

The confusion arises from the use of vacuum gauges, because a vacuum gauge tells you a different story as the weather changes, and at different elevations.

You must pin the vacuum gauge down by subtracting it's reading from the actual reading of a barometer which is on the same level as the brick machine. Learn to think in terms of absolute pressure and in terms of pounds per square inch inside the machine.

Abandon Vacuum Gauges

Now that absolute pressure gauges are available at reasonable prices, heavy clay products plants should abandon the confusing vacuum gauge entirely. It gives no definite information, and even if used in connection with a barometer, located at the machine level, calculations are required, which may be a source of error, and which take time.

Many machines are less efficient at high altitudes than at sea level, i.e. automobile engines and air compressors. A vacuum pump, however, becomes more efficient as altitude increases.

For example, consider a pump having a capacity of 60 CFM, and operating at an absolute pressure of 3″ in each case. From the pump formula, at Sea Level, where the barometer is 30″ it could pump 6 Cu. Ft. of air per minute from the clay.

In the hills where the average barometer is 29″ it could pump 6.2 Cu. Ft. of air from the clay per minute. In the mountains where the Barometer averages 20″ it could pump 9 Cu. Ft. of air from the clay per minute.

Pumps and Altitudes

Also from the same formula you will find that if you wish to process the clay at 2.5″ absolute, if the clay gives off 5 Cu. Ft. of air per minute in each case, a 60 CFM pump would be required at Sea Level; a 50 CFM pump would be required where the barometer averages 25″ and a 40 CFM pump would be required where the barometer averages 20.00″.

Roughly, a 25.00″ barometer corresponds to an altitude of 5,000′ and a 20″ barometer corresponds to an altitude of about 9,000′ above sea level.

Water-Vapor

While the vacuum process is generally called "deairing", a considerable volume of water-vapor comes off of the clay along with the air, when the vacuum chamber is under processing pressures of 1¼ to 3″ absolute.

We normally think of the boiling point of water as being 212° Fahr., but this is only when the air pressure on the water is 30.00″ of mercury, or 14.7 pounds per square inch.

At a pressure of 2.0″ absolute (or .9824 pounds per square inch) within the vacuum chamber, the boiling point of water is about 102° Fahr. As a result, there is a considerable volume of water-vapor flashing off the clay along with the air that comes out.

This volume of water vapor, if it is permitted to reach the vacuum pump, reduces the capacity of the pump to handle air.

Polishing Compound Formed

In addition to the water vapor, many very fine particles of clay—air floated clay—leave the vacuum chamber with the mixture of air and water-vapor.

The conventional vacuum filter, if ample in size, catches many of these, but many others, of very fine size, pass through the filter. When this mixture of air, water-vapor, and fine clay, reaches the vacuum pump, it is a polishing compound which wears the pump excessively.

While water boils at low pressures, at low temperatures, such as are encountered in the vacuum system, it also condenses at low temperatures while under low pressures, which exist all through the vacuum system's piping.

Advantage of this fact can be taken if a condensation tank is included in the vacuum piping system. Much of the water-vapor can be condensed into water in such a manner that it does not reach the pump.

In addition, if the expansion tank is of the proper design, many of the air floated clay particles can be entrapped in the condensate, and drained off daily, with the accumulation of condensed water in the bottom of the condensation tank. This reduces the responsibility of the vacuum-filter, and increases the efficiency of the pump.

Condensation Tanks

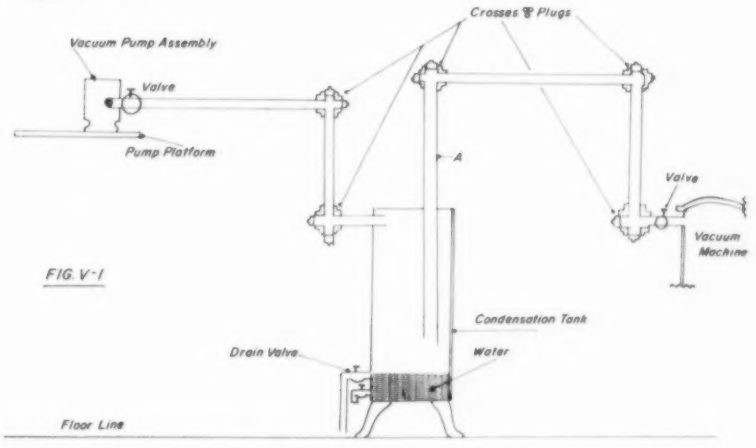
Figure V-1 illustrates a condensation tank in the vacuum system. If the drop-leg "A" is run down through the tank far enough so that the air and water vapor coming into the tank is bounced on the surface of the water in the bottom of the tank many of the small clay particles are entrapped by the water.

When the excess water is drained off through the "drain-valve" daily, the water will be milky in color, and it actually is a thin clay slip.

The vacuum pump should be located, if possible, above the top of the condensation tank so that any vapor than condenses between the tank and

(*Continued on page 64*)

Figure V-1



Stoody Hard-Facing
CARVES MAINTENANCE COSTS
on Pug Mill Knives...

Although Stoody 21 provided highly successful protection (above), Stoody Borod is recommended for extremely abrasive materials. Caution: when rebuilding and hard-facing cast iron knives preheat and hold at dull red heat during welding (about 800° F). Slow cooling, preferably in a furnace, is advised.

Here's how a large mid-western brick plant gets longer parts life, more production with less downtime in pug mill operations.

Pug mill knives are hard-faced with Stoody 21. The hard-facing procedure shown at left, above, protects wearing surfaces, maintains gauge and establishes a profile for fast renewal of hard-metal when necessary.

Normal life of knives without hard-facing is one week. At right, the worn knife has been in operation over 5 weeks! Knives can usually be rebuilt 3 to 5 times before discarding.

Plant operators are reducing downtime and avoiding frequent replacements by maintaining a constant inventory of hard-faced equipment ready for use. For your nearest Stoody dealer who can give you more hard-facing details, consult the "Yellow Pages" of the phone book...or write direct to the company.

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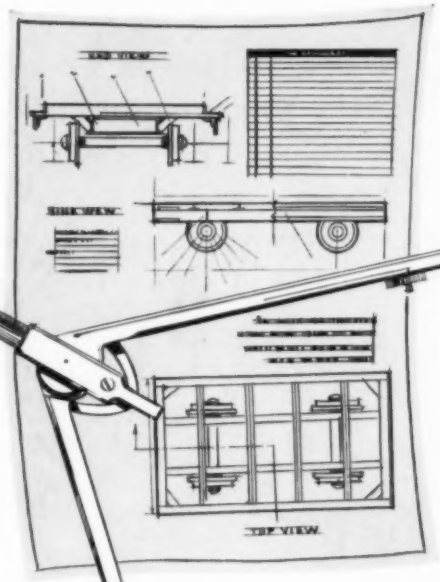
11950 East Slauson Avenue • Whittier, California



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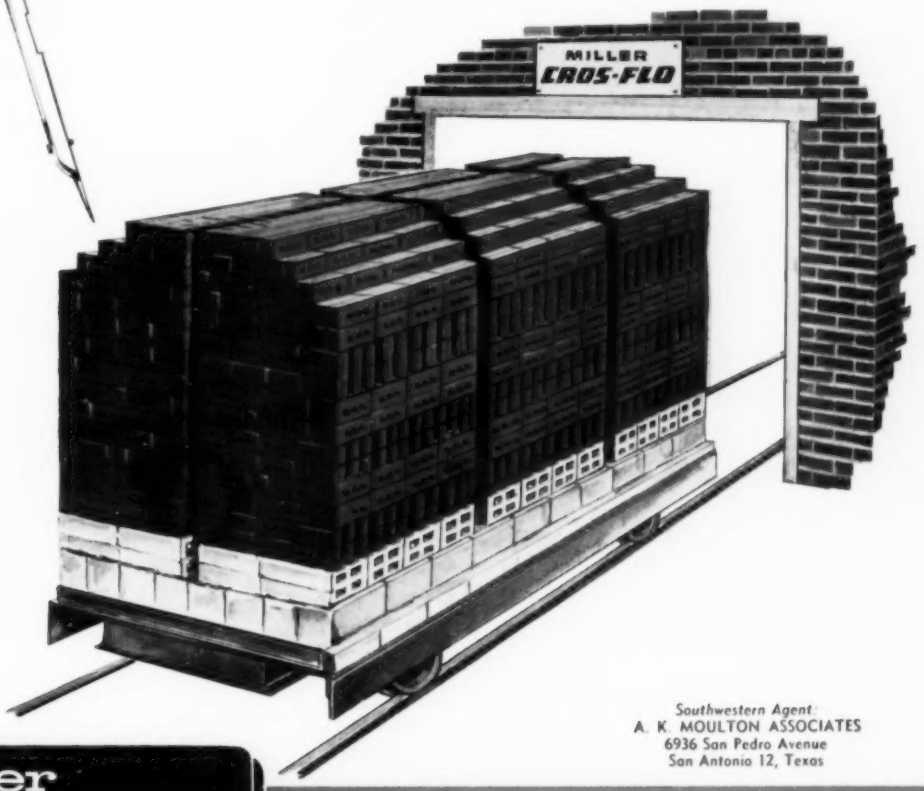
Miller Kiln Cars feature sturdy all welded construction; Timken Tapered Roller Bearings, two units per wheel; plus an exacting design and construction technique that builds into each kiln car many years of Miller engineering experience and excellence.

Why not call or write Miller Equipment Company's complete tunnel kiln and kiln car engineering service today? Experienced engineers will promptly analyze your needs and give you full information without obligation.



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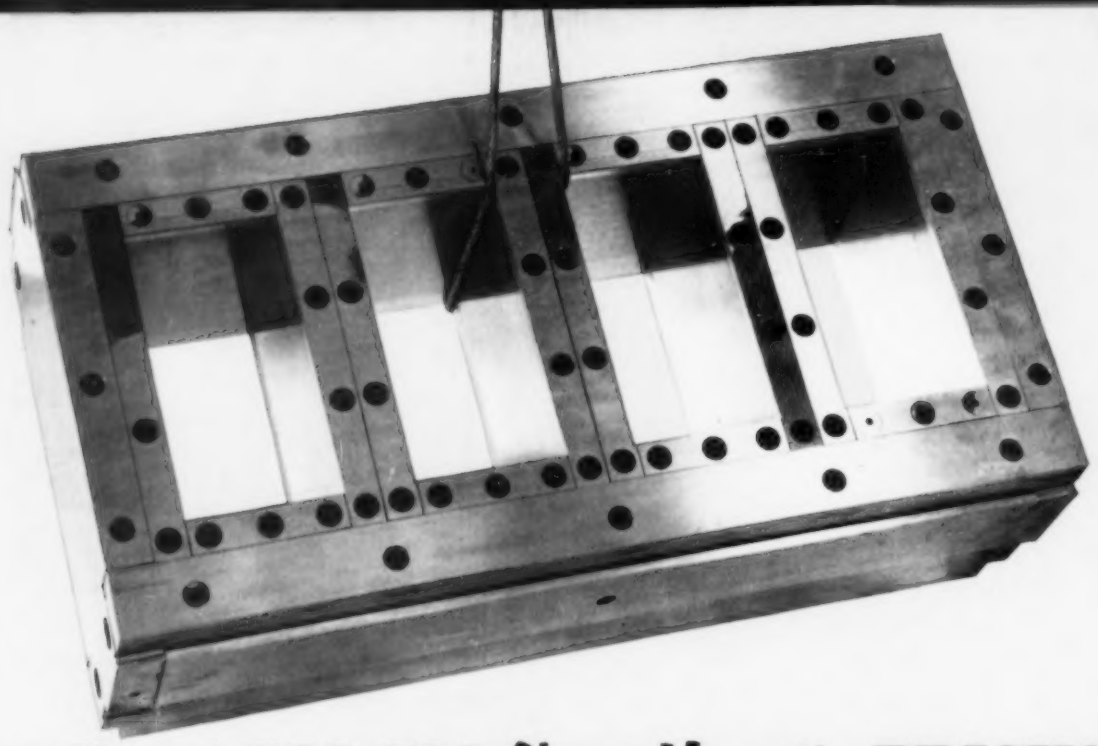


Handles 1,780,000 *Chrome Magnesite* BRICKS BEFORE REGRIND

New carbide lined mold box is furnished as a unit
Outlasts tool steel die liners up to 20 to 1

This is a cemented carbide* mold box. It was developed by the manufacturer of the Boyd press to serve one purpose . . . *reduce the unit cost of finished refractory brick.* It does this by providing die life of 12 to 20 times longer than tool steel and by reducing both the frequency and the time involved for die change, to an absolute minimum. Here's an example:

20 TIMES MORE OUTPUT PER MOLD

The Boyd Box shown above was placed in service on March 8 by a leading manufacturer of basic brick. Since no assembly of liners or individual mold alignment was necessary on the factory assembled unit, installation time was reduced. In the succeeding months 1,780,000 *chrome magnesite* brick were produced on the press, without one minute of downtime for liner service.

The mold box was removed on November 1st, replaced by another and returned to CB&W for expert regrind. The results?—445,000 brick were produced per cavity before 10 thousandths wear was effected on the carbide liners.

That's about *20 times* the production of only 17-18,000 impressions per cavity given by previous tool steel liners before rework . . . it also represents about 19 *fewer liner changes* per effective die life period.

SIZE CONTROL BENEFITS

Would you pay a little more for this kind of liner service? Many leaders of the industry are . . . and in return they are realizing unprecedented size control, welcome reductions in unit cost of brick and freedom from the time, labor and cost of replacement and regrinding operations.

These Advantages Cited:

- *unparalleled size control benefits.*
- *unitized construction.* Liners are securely cemented and ground-in to box. Are placed in press as a unit. Downtime for change-over is slashed. All surfaces wear evenly. No separate alignment or liner grinding is necessary on set up.
- *more press versatility.* Change over from one brick to another can be made quickly.
- *Guesswork,* rough handling and liner chipping and breakage during set-up is relieved or eliminated.
- *2 to 3 times more compressive strength* than carbon steel
- †*12 to 20 times more production* between regrinds and 10 times longer effective life on liners.
- The answer—to excessive liner wear on high abrasive refractories!

†*range depends upon type of brick produced.*

WRITE FOR DETAILS

Learn more about the Boyd Box; its wear characteristics, recommended usage and how you can take advantage of the expert, factory guaranteed, liner service that goes with it. Just write for details.

*Liners were produced from **CARBOLOY®**, General Electric cemented carbide.*

BOYD
POWER
PRESS

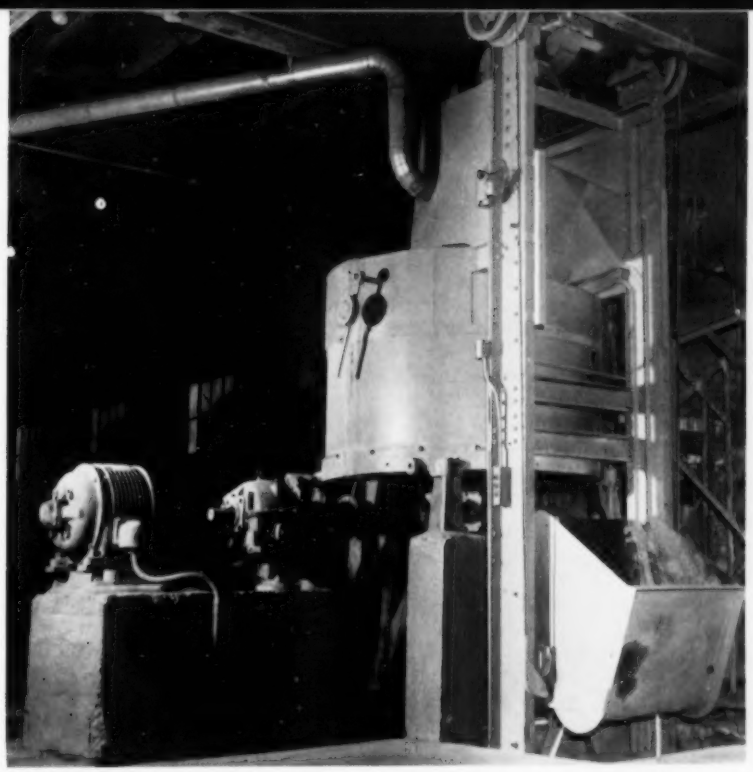
CHISHOLM, BOYD & WHITE COMPANY

A SUBSIDIARY OF WEHR STEEL COMPANY

610 W. 57TH STREET • CHICAGO 21, ILLINOIS

Third Expansion Since 1953 At Mexico Division

Specialty products are made by RE&S Div., many products licensed from other refractory companies.



Here's new 6' fully enclosed Simpson mixer with skip loader that blends aggregates and bonds at new section.

Two expansions, since plant facilities were installed in 1953, have taken place with a third one now underway which includes a new office building, additional storage facilities and plant equipment, all at a Canadian operation known as RE&S.

Refractories Engineering and Supplies Limited, a division of Mexico Refractories Co., represents the parent company in the Dominion of Canada with sales representatives, dealers, or distributors in all major refractory consuming areas.

The Head Office has been located in Hamilton, Ontario since the formation of this company thirteen years ago.

R. E. & S. as the Canadian division is commonly known, was designed around service to Canadian industries requiring refractory materials. Therefore, to supplement the products manufactured by the parent company and its other divisions, National Refractories Co., Big Savage Refractories Corp., and Niles Fire Brick Co., R. E. & S. is associated with eight other well known American refractory companies and one Scotch manufacturer of fire clay brick.

Listed among the other associate companies are the following: The Charles Taylor Sons Co., The Babcock and Wilcox Co., International Vermiculite Co., Refractories Specialties Corp., Aetna Fire Brick Co., Frank Samuels and Co., Norton Behr Manning and Eveready Briksaw Co.

As the Canadian division grew, a need was felt for manufacturing facilities in Canada. A survey was made to find the most suitable location for a manufacturing operation and property was purchased in Bronte, Ontario, approximately halfway between Hamilton and Toronto.

Product Specialties

The plant has been designed to produce refractory specialties—mor-

(Continued on next page)

BELOW: overall view of new construction at Bronte.

tars, plastics and castables—efficiently through a high degree of mechanization and quality control. Since products are manufactured under license to five leading U. S. producers, all raw materials which cannot be obtained in Canada are imported direct from the licensors.

The equipment installed at the Bronte plant includes the following:

A 9' diameter heavy-duty wet pan, integrally connected with an auger extrusion press, used mainly for the production of fireclay plastic, and ramming mixes. Following the extruder is the packaging zone and carton sealer.

A Lancaster dry mixer blends dry cements, castables and insulating products. The dry mixer discharges into a large hopper, which feeds directly into a bag-weighing machine and a bag-sewing station. The combination of dry Mixer and the discharge hopper gives uniformity of product from bag to bag.

Lancaster dry mixer feeding through discharge hopper directly to bag weighing, stitching equipment.

Simpson Mixer

Wet high temperature cement and mullite and alumina ramming mixes are produced in a 6-foot Simpson mixer, which completely blends aggregates and bonds, and is equipped for close control and distribution of tempering water. The Simpson pan discharges directly into the drum containers, and is designed to accomodate 20, 50, 100, 250 and 500-lb. drums. Each drum of product is weighed and balanced to its net content.

All raw materials used in the production of the 60-odd products at Bronte are sized and shipped in multiwall paper bags by the licensor, the net weights being related to the batch sizes to reduce manual batching to a minimum. Handling of all raw materials and finished products, throughout the plant, is by mechanical lift trucks or conveyors.

Large batches, such as those required for plastic firebrick, are made up in storage area in a Roura dump hopper for direct discharge into the pan.

Control Lab

A control laboratory has been provided for on-the-spot checks of moisture, grain size and workability.

The first plant facilities were installed in 1953 and the operation has been expanded twice since that time. At this time, some sixty refractory specialties are being produced at the Bronte plant.

At the present time, a third expansion program is being carried out at the Bronte property to consolidate the company's efforts in Southern Ontario. A new, modern, air-conditioned office building is being erected which will become the home of the accounting and billing departments, sales department and factory staff. Additional storage facilities are being erected and complete stocks of all refractory materials will be carried at Bronte for distribution through the Toronto and Hamilton areas.

A fleet of trucks will handle all shipments from one central source. The Bronte plant is located on the C.N.R. main line, and about a half mile from the Queen Elizabeth Way. Direct shipment can therefore be made by highway transport or direct rail car, as required.

It is the company's plan to continue expanding the Bronte operation as required in order to give the best possible service to the consuming industries.

Retzlers Purchase Columbia Fire Brick

C. F. Retzler and his son Charles, with a small group of friends, have purchased all the assets of Columbia Fire Brick Co., Dover, Ohio. The business will be carried on as before with no change in company name.

Clarence Retzler reports that the Canton office will be discontinued immediately and all business will be conducted from the plant near Dover which already has a well-equipped office. Clarence Retzler is president of the company; his son Charles, as vice president, will oversee sales.

The E. A. Bowman family had been principal owners of the firm since it was formed in 1903.. C. F. Retzler's father started with Mr. Bowman, and Retzler himself has been with the company since 1915; his son employed there for 12 years.

Botfield Appoints Gower as Research Director

I. W. Gower has recently been appointed Director of Research for Botfield Refractories Co., Philadelphia. He formerly was employed in the research department at Mexico Refractories Co.

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tion machine and a number of F-R-H tile cutters for the many sizes of tile made by the Company. Structural tile are made in the other, a specialized machine room using a Chambers "Chicago Royal", a Chambers cutter and a Swedish Sandvik off bearing belt.

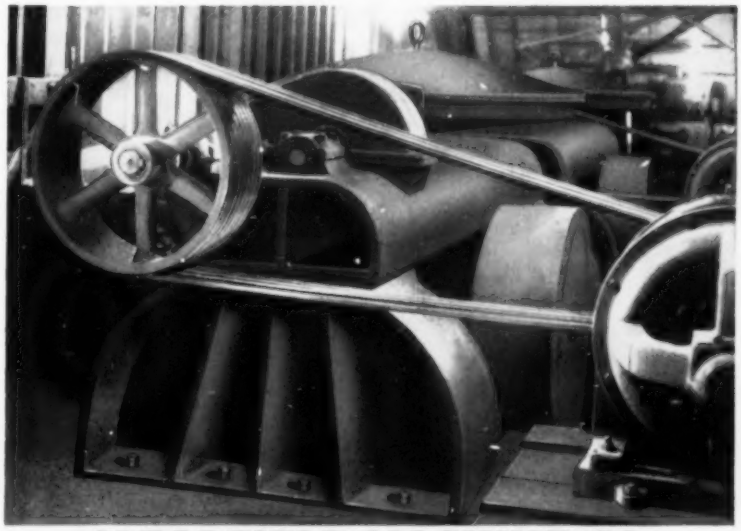
Drying and firing follow standard practice except that dryer tunnels are double tracked. Emptied cars are returned from the transfer car to the mill room by drag conveyors and gravity automatically. Thirty two and forty foot beehive kilns are equipped for firing with both natural gas and oil.

During extreme weather, the #4 oil is heated for better burning conditions. With a strong demand for drain tile and an affiliated Company, Kankakee Clay Products at nearby Kankakee, Illinois concentrating on the production of structural tile, most production at the St. Anne plant is drain tile.

A large quantity of tile is moved directly from kilns on roller conveyors to trailer trucks for delivery, cutting handling costs significantly. During the off season, production is moved with tile carts to yard storage so arranged that trailers can be readily loaded from stacks.

The St. Anne plant of Eastern Illinois Clay Co. has been operated continuously since it was built by members of the present management team which includes Albert Meier, president of the Company, Louis Meier, treasurer and office manager, and Byron and Arnold Meier who are in charge of manufacturing and shipping respectively.

The Clearfield MAXIMULLER is unequaled for *Low* Grinding Costs



The Maximuller, built in two sizes, No. 1 with 10 ft. diameter and No. 2 with 9 ft. diameter, represents a modern development of our standard dry pan design. It incorporates the same basic principles, that have proved their utility in meeting dry grinding requirements, as those of the heavy duty dry pans we have produced for many years. Among these features are the revolving pan with screen plates in the pan bottom and the large mullers, widely spaced for the greatest possible crushing effect. Though the operating principles are not new or revolutionary, certain design developments have enabled us to apply, with greater efficiency, our accumulated knowledge gained in over 75 years of constructing dry pan mullers. We believe the Clearfield Maximuller with its low maintenance and power consumption, is unequalled on the basis of cost per ton of product.

For complete description and specifications write for Bulletin B-53.

CLEARFIELD MACHINE CO.

Clearfield, Pennsylvania

Pacific Coast Representatives: Fernholtz Machinery Company
8468 Melrose Place, Los Angeles 46, Calif.

Region 4 Elects Tefft President

Region Director Platt looks over promotion material

Phillip Tefft, of the Claycraft Co., Columbus, was reelected president and Donald J. Renkert, of Metropolitan Brick, Inc., Canton, was elected vice president of Region 4—SCPI, at the annual meeting held at Holiday Inn in Canton.

James R. Platt, was renamed regional director of the 4-state organization, which has executive headquarters at Canton.

N. O. Geisinger, of New Philadelphia, was reelected treasurer. He has held this post since the group was organized in 1940.

Annual meeting guest speakers included Douglas L. Whitlock, chairman of the board of National SCPI, of Washington, D. C.; Tom Davis, of Cleveland and secretary of the Ohio Conference of Brickmasons; and Edgar Baker, of Neward, vice president of the Brickmasons and Plasterers International Union.

Baker reported that Ohio BM&PIU Locals are continuing apprentice training and pledged their further support in providing an adequate supply of skilled brickmasons.

Paul Johnson, deputy director of SCPRF outlined current progress in the development of new clay products and advanced construction techniques to lower costs and improve craftsmanship.

Details of a nationwide membership campaign were presented by Jack Clark, of Washington, D. C., and promotion director of National SCPI, and William Roark, director of Mason Relations of SCPI National, reviewed the Market Survey activities of his department.

Ohio's 1959 "apprentice champion" will be selected at a statewide competition to be staged in conjunction with the Cleveland Home and Flower Show in March.

(*Continued on page 63*)

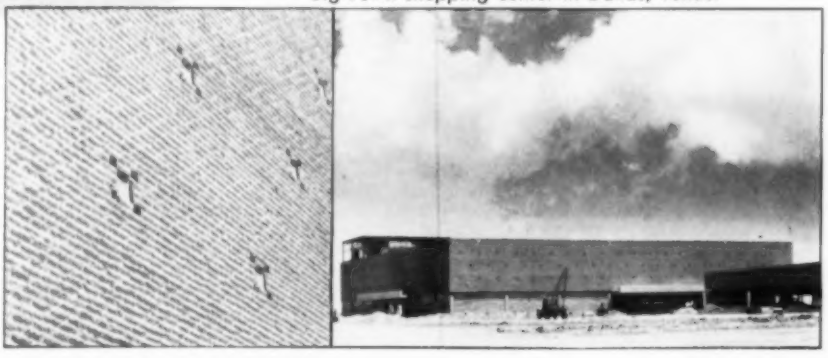
You Get All These Benefits ONLY With

ROCKFACER

U. S. PATENT NO. 2,801,626 FOREIGN PATENTS PENDING

- ★ You double the textures of brick you can offer — without increasing your inventory.
- ★ You turn culls into No. 1 Premium brick.
- ★ You save money on your rockface costs — over hand methods.
- ★ You increase your mark-up with rockfaced texture, at negligible cost.
- ★ You get fast production — 2000 bricks per hour.
- ★ You sell a NEW product — BRICK CHIPS — for road or roofing chat, at no cost to you.

BELOW: (Left) Note handsome texture provided by rockface brick on new Sanger's department store (right) in fabulous Big Town shopping center in Dallas, Texas.



SEND SAMPLES OF YOUR BRICK. We'll rockface them and return them promptly. Prove to yourself the profit available through the ROCKFACER!

ROCKFACER COMPANY
503 Hickory Tree Rd.
P. O. Box 547,
Mesquite, Texas
ATlantic 5-6316

Buying

Materials Equipment Services?

B&CR offers readers quick service for your inquiries concerning any of the keyed items in the New Products pages, on this card, or in the special information sections. You can also get additional, complete information on any advertisement in this issue.

All you do is circle the number of the editorial item or the page number of the advertisement on this card, and mail it to us.

MANGANESE ORES—Chromite, Magnetite, Fluorspar and Manganese can be supplied by National Paint & Manganese. Company has greater facilities now, can supply faster through local outlets, offers a wider range of products. National Paint & Manganese Co.

257/Circle on Reader's Service Coupon

STANLEY TIGHTENERS—The new O tightener is said to operate with ease and speed in any position; use fewer strokes for takeup, reduce operator fatigue. Manually operated tool has unlimited takeup, has two holding pawls on tensioning wheels. Stanley Steel Strapping Co.

258/Circle on Reader's Service Coupon

BOYD PRESS—The new Boyd press has many improvements: new bearings, stronger toggles, heavier frames, automatic force-feed lubrication, air-operated clutch brake, air operated charger. Can give you top profit dollar from high volume dry press brick production. Chisholm, Boyd & White Co.

259/Circle on Reader's Service Coupon

TRUCK CRANE—Can unload off either side, put loads on the sidewalk; handles brick or block unpalleted or palleted or packaged. Bradney Machine Co.

260/Circle on Reader's Service Coupon

CONVEYOR BELTING—Scandura has new fire-proof belts that eliminate fire hazards, will not strip or tear. Belt absorbs terrific impact with minimum abrasion, maker says. Scandinavia Belting Co.

261/Circle on Reader's Service Coupon

BINDERS—Glutrin (liquid) or Goulac (powder) can help increase molding and dry strength of brick, clay refractories, pipe, tile, and other clay products. Small amounts required—easy to use. Robeson Process Co.

262/Circle on Reader's Service Coupon

INVENTORY SCALE—A new totalizing scale by Thayer fits over any conveyor, continuously weighs material passing through. Can be used on level or inclined conveyors. New plate leverage system is guaranteed for the life of the scale. Thayer Corp.

263/Circle on Reader's Service Coupon

ORTON CONES—More uniform ware can be had with use of these cones. They can be placed throughout the setting to provide a visual check on the ware during the critical high fire stage; indicate end point of firing; show distribution of heat throughout the ware. Edw. Orton Jr., Ceramic Foundation.

264/Circle on Reader's Service Coupon

SCREEN HEATERS—Heated screens can eliminate blinding, increase tonnage, build greater profits and speed your production. F. R. Hannon & Sons.

265/Circle on Reader's Service Coupon

CEMENT GUN—With this machine, two or three of your men can easily place a lining 1 to 6" thick in one to continuous operation; can place up to 5,000 lbs. of refractory material an hour. Saves down time, material and extends the life of your present linings. Cement Gun Co.

266/Circle on Reader's Service Coupon

Please send me more information concerning the items I have Circled.

3-59

226 Allied Engineering
227 Manufacturers Equip.
228 Pemco Corp.
229 Bonnot Co.
230 R. G. Varner
231 Erickson Power Lift
232 W. Va. Pulp & Paper
233 Bickerstaff, Inc.
234 Titanium Alloy
235 Minneapolis-Honeywell
236 Harrop Ceramic
237 North State Pyro.
238 Baltimore & Ohio
239 North American Mfg.
240 Swindell-Dressler
241 Stanley Strapping
242 Raybestos-Manhattan
243 Miller Equipment
244 Chambers Bros.
245 U. S. Hoffman
246 T. L. Smith
247 Paris Mfg. Co.
248 Kimberly-Clark
249 Universal Atlas
250 Ferro Corp.
251 Stoody Co.
252 Chisholm, Boyd & White
253 Robinson Ventilating
254 Berkshire Chemicals
255 Philadelphia Quartz
256 Ceramic Color & Chem.
257 Nat'l Paint & Mang.
258 Stanley Steel
259 Chisholm, Boyd & White
260 Bradney Machine
261 Scandinavia Belting
262 Robeson Process
263 Thayer Scale
264 Ed. Orton
265 F. R. Hannon
266 Cement Gun
267 Drakenfeld
268 Buffalo Forge
269 J. C. Steele
270 Walter Stoll
271 Fate-Root-Heath
272 Ludlow-Saylor
273 Rockfacer Co.
274 Besser Co.
275 American Clay Mchry.
276 W. S. Tyler
277 Deister Concentrator
278 Link-Belt
279 Hobart Bros.
280 Erickson Forks
281 K. T. Snyder
282 Acme Steel
283 Automatic Trans.
284 Process Solvent
285 Lima Motors
286 O. Hommel
287 Hauck Mfg.
288 Cardinal
289 Dodge Mfg.
290 Massey-Ferguson
291 Williamson Adhesives
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Page 3 Berkshire Chem.
Page 4 Robinson Ventilating
Page 5 Link-Belt
Page 6 R. G. Varner Steel
Page 7 Kimberly-Clark
Page 8 Dodge Mfg.
Page 9 Metal & Thermit Corp.
Page 10 Lead Industries Assoc.
Page 11 Westinghouse Electric
Page 12 Pearne & Lacy Machine
Page 13 B. F. Drakenfeld & Co.
Page 14 Bickerstaff, Inc.
Page 15 W. Va. Pulp & Paper
Page 17 Raybestos-Manhattan
Page 22 North State Pyrophyllite
Page 23 Builders Equipment
Page 24 Buffalo Forge
Page 25 Besser Co.
Page 26 Sanford-Day Iron Works
Page 27 Williams Patent Crusher
Page 28 Towmotor Corp.
Page 29 Chambers Bros.
Page 32 Denver Fire Clay
Page 33 Signode Steel
Page 34 Stephens-Adamson
Page 39 Titanium Alloy
Page 41 Ferro Corp.
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Page 68 International Clay
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Page 68 Universal Vibrating
Page 69 D. R. Hendryx & Assoc.
Page 70 O. Hommel
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Page 72 Deister Concentrator
Page 72 Flexible Steel
Page 73 Ceramic Color & Chem.
Page 73 Walter Stoll
Page 73 Chase Foundry
Page 74 Eagle Iron
Page 74 Overstrom
Page 74 Des Moines Glove
Page 74 Mason Color & Chem.
Page 75 F. R. Hannon
Page 75 Engineering Assoc.
Page 78 J. C. Steele
Page 79 Fate-Root-Heath
Page 80 American Clay Machinery

NAME _____ TITLE _____

COMPANY _____

STREET _____

CITY _____ ZONE _____ STATE _____

This Card Void After May 28, 1959

COLOR—By facing your common brick with Drakenfeld glazes you can get premium prices. Drakenfeld will help solve your color application problems. B. F. Drakenfeld & Co.
267/Circle on Reader's Service Coupon

FANS—Buffalo Forge CR radial blade fans are built sturdy to work under tough conditions. Use of a refinement of the radial blade design gives both boosted performance and reduced wear. Buffalo Forge Co.
268/Circle on Reader's Service Coupon

CUTTERS—Steele has a new spring assembly that replaces the overhead chain and pulley, eliminating the need for overhead beams or the posts formerly required for the installation of their #18 cutter. The spring assembly also provides much smoother action. J. C. Steele & Sons.
269/Circle on Reader's Service Coupon

MOISTURE CONTROL—Stoll has an automatic moisture control that is said to provide 100% control in pug mill or batch mixer; automatically hold desired moisture content, provide against product size variation. Walter C. Stoll & Sons.
270/Circle on Reader's Service Coupon

EXTRUSION—Marion Brick uses an F-R-H de-airing extrusion machine to get close quality control. Their F-R-H is said to provide extra hard, uniform columns that help maintain production schedules. Fate-Root-Heath Co.
271/Circle on Reader's Service Coupon

SCREENS AND CLOTHS—By Ludlow-Saylor are said to have better dimensional stability, resistance to wear, pressure, vibration and heat because of extra efforts in the manufacturing process. Ludlow-Saylor Wire Cloth Co.
272/Circle on Reader's Service Coupon

ROCKFACERS—Can turn a loss into a profit by making 2,000 culls per hour into a premium rock-faced brick. One owner says that his machine was paid for 3 times in the first 9 months. Rockfacer Co.
273/Circle on Reader's Service Coupon

BATCH MIXERS—Besser machines have twin spiral blades made of Ni-Hard iron; quick acting, air operated discharge gate; entire contents of mixer drum can be discharged in 15 to 20 seconds. Besser Co.
274/Circle on Reader's Service Coupon

GRINDER—America's 384 grinder has been designed to handle big volume grinding at a rate of a ton a minute, handling hard clay shale and other material. Materials can be handled wet or dry because there are no screen plates to clog. American Clay Machinery Co.
275/Circle on Reader's Service Coupon

SCREEN SECTIONS—Tyler screen sections are made for all makes of vibrating screens in any mesh or metal; made with hook-strip or bent-edge construction to suit your machine. W. S. Tyler Co.
276/Circle on Reader's Service Coupon

LEAHY SCREENS—New model E screens with FlexElex heating assure change of screen cloth as quickly and easily as can be done on conventional, unheated models. No breaking or remaking of electrical connections in the transformer-screen circuit when jackets are changed. Deister Concentrator Co.
277/Circle on Reader's Service Coupon

VIBRATING SCREENS—By Link-Belt have high intensity, circular motion imparted by a simple, two-bearing vibrator; mechanism is fully enclosed for protection from heat, moisture and abrasive dust. Link-Belt Co.
278/Circle on Reader's Service Coupon

FIRST CLASS
Permit No. 183
Chicago, Ill.

BUSINESS REPLY MAIL
No Postage Stamp Necessary If Mailed in the United States

POSTAGE WILL BE PAID BY

BRICK & CLAY RECORD

5 South Wabash Avenue

Chicago 3, Illinois

Platt presented to Region 4 members the details of a complete engineering-promotional program for 1959 in which dealer informational meetings again will be emphasized. Comprehensive market surveys are to be made in conjunction with SCPI personnel.

In addition to the promotion of locally-made brick and tile, the program incorporates developments of the SCPRF. They include the design of tornado and blast-resistant clay masonry wells successfully tested at Yucca Flats in Nevada. The design can be applied to schools and industrial construction, as well as homes, and details are available from any Region 4 office.

Design Competition

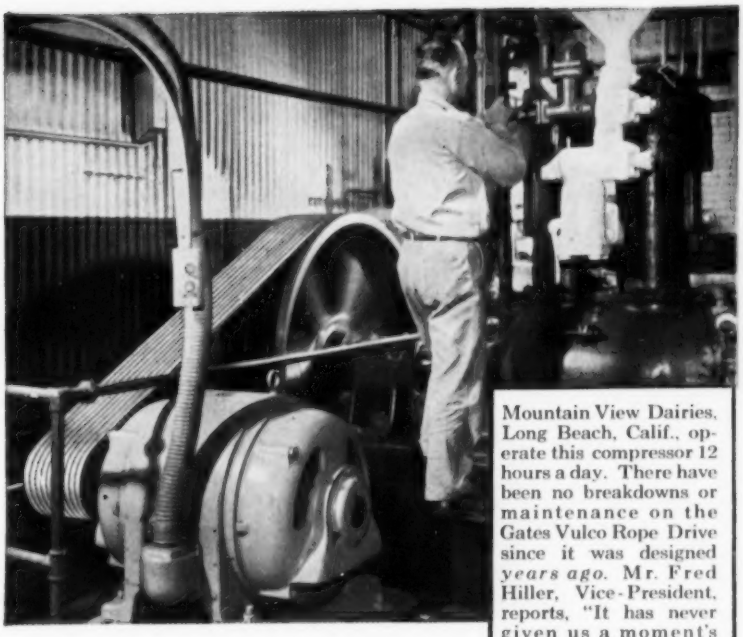
Region 4 will continue to provide material for architectural classes in colleges and universities throughout the area, and Platt also announced continuation of a design competition for architectural students.

In addition to complete service to all segments of the construction industry, Region 4 through its several offices offers the building public literature and other information on the modern use of brick and tile. Literature and services are available without charge, and Regional personnel is available for group meeting presentation, Platt pointed out.

Along with officers, the Region 4 board includes Paul Schneider, of the West Virginia Brick Co., Charleston; Clarence Lower, of the New Bethlehem Brick & Tile Co., of New Bethlehem, Pa.; George Anderson, of the Darlington Brick Co., of Darlington, Pa.; James Wilcox, Alliance Clay Product Co., Alliance; Otto Buehler, Fairfield Brick Co., of Zoarville, and C. M. Shafer, Stone Creek Brick Co., Stone Creek. Region 4 encompasses Ohio, Western Pennsylvania, Michigan and West Virginia.

J. Kent Early, of Kyanite, Dies

J. Kent Early, secretary of Kyanite Mining Corp., Dillwyn, Va., died January 13. He joined the organization as secretary in January, 1948.

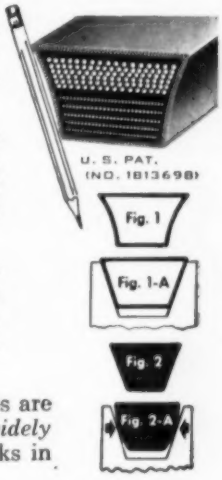


Mountain View Dairies, Long Beach, Calif., operate this compressor 12 hours a day. There have been no breakdowns or maintenance on the Gates Vulco Rope Drive since it was designed *years ago.* Mr. Fred Hiller, Vice-President, reports, "It has never given us a moment's trouble."

The No. 1 choice of industry everywhere

...the V-belt with concave sides

To prove to yourself why concave sides give this V-belt far longer life, make this simple test: bend a Gates V-Belt as if it were going around a sheave. Feel how the concave sides (Fig. 1) *fill out* ... become perfectly straight (Fig. 1-A).



Note how the belt makes full contact with the sides of a sheave ... grips evenly, thus distributing wear uniformly along the sides of the belt. Uniform wear lengthens belt life — keeps costs down.

With a straight-sided belt (Fig. 2) the sides *bulge out* when the belt is bent, and wear is concentrated on the bulge (Fig. 2-A). Uneven wear shortens belt life — increases belt costs.

Because Gates V-Belts with concave sides are so universally preferred, they are the *most widely available.* There are Gates Distributor stocks in industrial centers *throughout the world.*

The Gates Rubber Company, Denver, Colorado
Gates Rubber of Canada Ltd., Brantford, Ontario

Gates *World's Largest Maker of V-Belts* TPA 392

Gates V ULCO ROPE Drives

the pump will drain back into the tank.

It is the writer's opinion that the vacuum filter should be located between the condensation tank and the vacuum pump, in which case the filter would remain cleaner and require new filter elements less often. Customarily and traditionally, the vacuum filter is located near the vacuum chamber.

A condensation tank, properly installed and properly used, will increase the life of the vacuum pump really amazingly. Several cases, from many, will be cited.

Pump Lasts Longer

On one plant, using a rotary vacuum pump, they had to send the pump back to the factory about every nine months for rebuilding.

After they installed the condensation tank, the pump ran for 3½ years without any servicing other than oil changes. (The writer quit watching it after 3½ years and does not know how much longer it ran without repair).

Another plant, using a piston type vacuum pump had to remove the head and either clean, or replace, the valves, every two or three weeks. They installed a condensation tank and when the writer visited this plant a year later the pump, up to that time, had required no servicing.

9 Years—No Wear

On another plant, where the Superintendent was a slave to detail, they went still further. He jacketed the condensation tank and ran cold water through the jacket. At the end of nine years the vacuum pump (rotary type) was taken apart and examined and there was no discernible wear, even though the brick machine had been operated every working day, and at a high capacity.

Vacuum Pumps

There are many types of vacuum pumps. In the broad sense, a kiln stack is a vacuum pump because it is technically a machine which produces a pressure in the exhaust flue which is below the pressure of the atmosphere surrounding the kiln. A pitcher pump is also a vacuum pump.

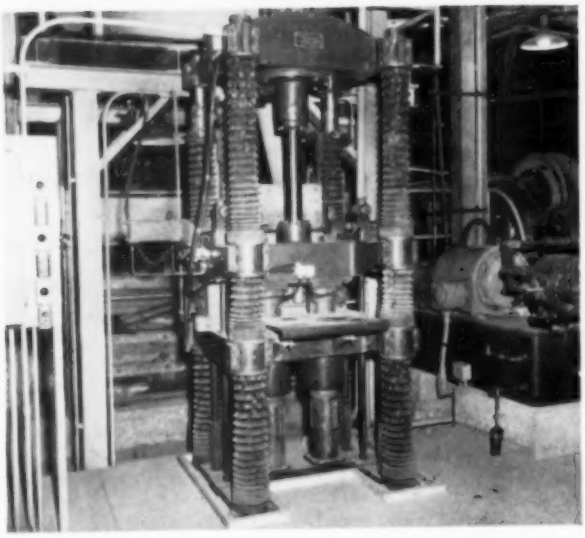
However, on heavy clay products plants power driven pumps which will provide an absolute pressure approaching absolute Zero are used with few exceptions.

An air compressor can be used as a vacuum pump. In compressing air, the inlet of the pump is as free and un-restricted as possible to that the pump can gulp in air at atmospheric pressure. When used as a vacuum pump the inlet to an air compressor is piped to a vacuum chamber through air-tight piping. A Ford or Chevrolet engine, if driven by an electric motor can be used as a vacuum pump, if the gas-air manifold is altered, made airtight, and piped to a vacuum chamber through air-tight piping.

Steam ejectors, or steam jet vacuum pumps will create very low absolute pressures, but the cost of steam is usually prohibitive on clay plants.

(Continued on page 67)

it's Lassman for **DRY PRESSING**



Fully Automatic Hydraulic Dry Press for manufacture of ladle sleeves.

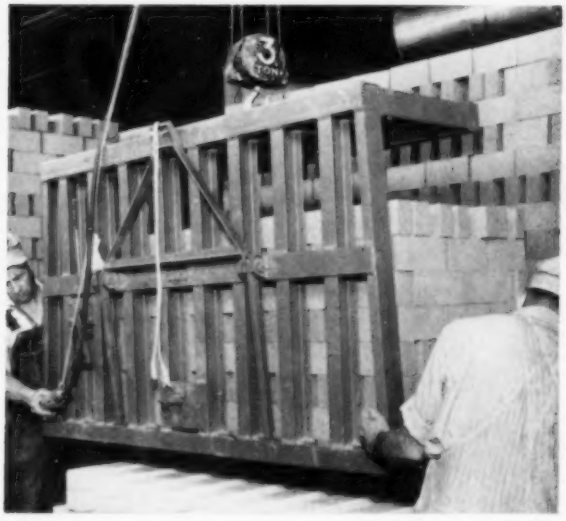
For over 25 years we have specialized in dry press forming of refractory brick and briquetting of granulated materials. From ¾" thick floor tile to 16" deep ladle nozzles, we are able to provide a product of commercially uniform density and free from entrapped air laminations. Our presses, hydraulically powered, assure you of flexible, smooth performance without leaks and with minimum maintenance.

We welcome the opportunity to discuss your dry pressing problems with you.

Quality EQUIPMENT for *Quality* PERFORMANCE

BENJAMIN LASSMAN & SON Route 8, GLENSHAW, PA.

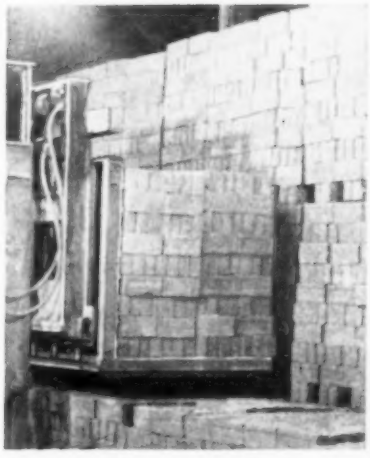
Make Brick Handling Easy...



PRIESTER Brick Forks

- Save Time
- Save Money
- Save Labor

Also Priester truck cranes for unloading from delivery trucks. Write for bulletin.



Brick in units of any size are handled by Priester Brick Forks. Automatic operation simplifies and speeds brick handling setting and drawing kilns, loading and unloading trucks and box cars.

Forks with flap grippers for cored and solid brick. Give service . . . take the hard work out of brick handling. Write today for more information.

BRADNEY MACHINE CO., INC.
Middletown, New York

CUT *ANY* SPECIAL SIZE or SHAPE
ARCH-SKEW-KEY-WEDGE WITH THE ALL-NEW-

Clipper
"SAILS RIGHT THRU"

SUPERMATIC MASONRY SAW

with STA-LEVEL HEAD
and
HI-LO CONTROL WHEEL

NO ADJUSTMENTS TO MAKE
No Need to Turn Off Motor to Raise or Lower Cutting Head . . Ready to Cut at Any Height From 0" to 17" . . . No Levers or Knobs to Pull. No Gears, No Slides or Unnecessary Parts to Wear Out!

YOU NAME IT THE SAW— THE JOB— THE MATERIAL--

. . . Clipper will name the Best Premium Quality Blade . . . Break - Resistant, Abrasive or Diamond, to give you the Fastest Cut . . . at the Lowest Cost . . . with the Greatest Ease . . . Anytime . . . Anywhere! Mail the coupon or call your Clipper Factory Trained Representative for Same Day Service!

Clipper also builds the famous **"Select-A-Notch"** Masonry Saw—the Saw that one man can adjust from his cutting position. priced from **$335**

Genuine Clipper Products Sold Direct— Immediate Shipment From Factory Branches Coast To Coast

CLIPPER MANUFACTURING CO.
2815 WARWICK ST. • KANSAS CITY 8, MO. 239X

- ☐ Ship a SUPERMATIC Masonry Saw on FREE TRIAL
- ☐ Send FREE literature on Clipper Super-Matic and Select-A-Notch Masonry Saws
- ☐ Send information on Clipper Premium Quality Diamond, Break-Resistant and Abrasive Blades
- ☐ Send my Clipper Factory Trained Representative to see me

NAME _____
ADDRESS _____
CITY, STATE _____

- **Chromite**
- **Magnetite**
- **Fluorspar**
- **Manganese**

Since 1894 we have been in the forefront as suppliers of manganese ores of fine quality.

We are now considerably expanding our facilities, and setting in motion a program of modernization which we feel will substantially increase our value to our customers.

More local outlets will insure speedier delivery . . . new packaging will virtually eliminate breakage . . . color coded bags will make for easier distribution.

Importantly we will now offer a wider range of products to the brick and clay industry. Those listed here are all immediately available—all will be milled to your specifications.

Our personal service and the integrity of our products remain unchanged.

A division of Howe Sound Co., Inc.

NATIONAL PAINT & MANGANESE COMPANY

Lynchburg, Virginia

NATIONAL "ALWAYS UNIFORM" ESTABLISHED 1894

1 BESSER *Batch Mixer*
2 BESSER *Skip Loader*
3 BESSER *Vibrapac*
4 BESSER *Off-bearing Hoist*

A 6-115-45H

WINNING COMBINATION
for Block Makers . . .

Here is the ultimate in block making equipment . . . the Besser Unitized Vibrapac with Batch Mixer, Skip Loader and Power Off-bearing Hoist . . . *all on one floor*. Steps up block production . . . saves manpower. Produces three 8 x 8 x 16 block (or equivalent) at a time, on one Plain Pallet, with capacity up to 10,000 block per day. Overall dimensions of unitized machine is 37′ long, 14′3″ wide and 23′6″ high.

If you want to increase production of high quality block, consider this winning combination. Ask your nearby Besser representative for literature.

BESSER COMPANY ALPENA, MICHIGAN, U. S. A.

SEANOR Continued

Since a steam ejector has no moving parts, it is logical to think that it would require little attention and repair, but this is not the case. For clay plant work the nozzles must be cleaned, and replaced, quite frequently. Rotary, motor driven, vacuum pumps are used, on clay plants, quite generally, although a few reciprocating (modified air compressors) pumps are used here and there.

On some rotary vacuum pumps the final seal is the viscosity of the lubricating oil, a thin film of which, between the casing and the blades on the rotating and power driven assembly, makes the final seal.

This type of pump, as used on heavy clay plants, is water cooled. In their use it is important to keep the temperature of the cooling water, which is circulated through the pump, at the right temperature.

If too little water is circulated, the oil-film becomes too low in viscosity to make a good final seal, and if too much cooling water is circulated through the pump, results are deleterious. The efficiency of many pumps is reduced by failure to watch and regulate the temperature of cooling water.

Some rotary vacuum pumps use water as a seal and to entrap the air and push it out. These pumps must have the right volumetric supply of water to be efficient, not too little, nor too much.

Air Moisture

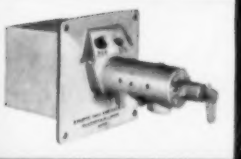
Most vacuum pumps are designed with the expectation that they will be used to pump air that is reasonably dry, and to work at rather low absolute pressures.

The air which a vacuum pump on a clay plant handles is wet, and contains many air floated clay particles. Also, in some cases, they are called upon to provide only low vacuums, as is often the case in the manufacture of textured brick, where, if the vacuum is too high, the texture cannot be developed. This low vacuum is secured by bleeding air into the vacuum chamber, in sufficient volume to hold the vacuum low enough for a good texture. In this case the pump handles a much greater volume

(*Continued on page 69*)

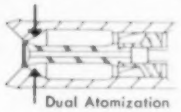
BURNING EFFICIENCY ASSURED

New 250 ft Allied tunnel kiln at Hanford Brick Company, Inc., Burlington, North Carolina



with Eclipse Gas-Oil Burners

More profit return is assured from tunnel kiln efficiency features by the use of 44 Eclipse "CF" Gas-Oil Burners in this new installation. That's because unique atomizing tips on burners provide better combustion that results in more heat per fuel dollar, burning gas or fuel oil.



Dual Atomization

Combustion air in "CF" tips is mixed with the fuel in a rotating and converging pattern that results in complete air/fuel mixing, cleaner combustion . . . and constant temperatures with stable, minimum flames.

Fast, positive switching from one fuel to another in event of sudden fuel shutoff is a simple matter with "CF" burners. All types of industrial gases and commercial oils may be used, or straight oil versions are available. Fuel, installation, and application flexibility of Eclipse "CF" Burners simplifies kiln construction and operation. Air and gas inlets that can be rotated a full 360 deg and the dual-port oil ratio valve facilitate installation. Flame adjustments are made easily and quickly. The entire burner may be removed from the mounting flange for cleaning.

If you are planning a new tunnel or periodic kiln . . . or are modernizing an existing unit . . . investigate Eclipse as the unified source for your fuel-fired burners, blowers, mixers, and valves.

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Eclipse Fuel Engineering Co. of Canada, Ltd., 70 Upjohn Road, Don Mills, Ont.

Eclipse COMBUSTION EQUIPMENT
"Most complete line, anywhere!"

The Rumors Are TRUE

YES, The International Clay Machinery Company of Dayton, Ohio has changed hands!

The reason—to allow the former management to retire and to provide a younger more dynamic team to take over. The expected result is to improve all phases of customer service including improved products.

The policy of The International Clay Machinery Co.—to supply all phases of the ceramic-working industry is of course to be continued. Orders now on file will be filled promptly and as soon as the management changeover is finalized new business efforts will be stepped up.

We are looking forward to meeting today's exacting conditions with profit for you and complete satisfaction for your customers.

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CLAY MACHINERY CO. DAYTON 1, OHIO
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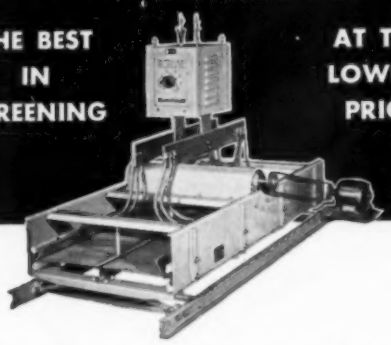
THE BEST IN SCREENING

AT THE LOWEST PRICE



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GRAY BRICK BEAUTIES

made with Foote EBONY Manganese

Air floated Foote EBONY Manganese Ore—*famous for more than 30 years as the industry's No. 1 gray coloring agent*—gives outstanding color uniformity to a variety of gray brick formulations. The consistent and extreme fineness of this material produces flat gray shades that are free of specks and patches of lights and darks. The shades produced in different parts of the kiln are so uniform that sorting is usually unnecessary.

Write for complete details on EBONY Manganese Ore, PETALITE, and Foote's many other ceramic materials.

FOOTE MINERAL COMPANY
442 Eighteen West Chelten Building
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of air per minute than it was designed for. A vacuum pump is like a kiln draft fan, and the more it is starved the less power it will take.

Consequently when a pump is loaded up with by-passed air it should be driven by a motor that is 50% larger than the motor specified in the catalog, which presumes that the pump will work at very low pressures (very high vacuums).

One Man's Experience

Some time ago, a manufacturer bought an excellent, high priced, pump. It was designed to work at a few millimeters below the barometer, or at a "high" vacuum.

This manufacturer intended to work at about 3.00" below the barometer and he considered this to be a "high" vacuum. The writer advised him to use a motor 50% larger than specified in the catalog, but one cannot blame him for using the size of motor specified in the makers catalog rather than one recommended by an itinerant machinery salesman.

However, after burning out several motors he finally installed the larger motor, which he would have done in the first place if he had thought the problem through.

Take Care Of Pumps

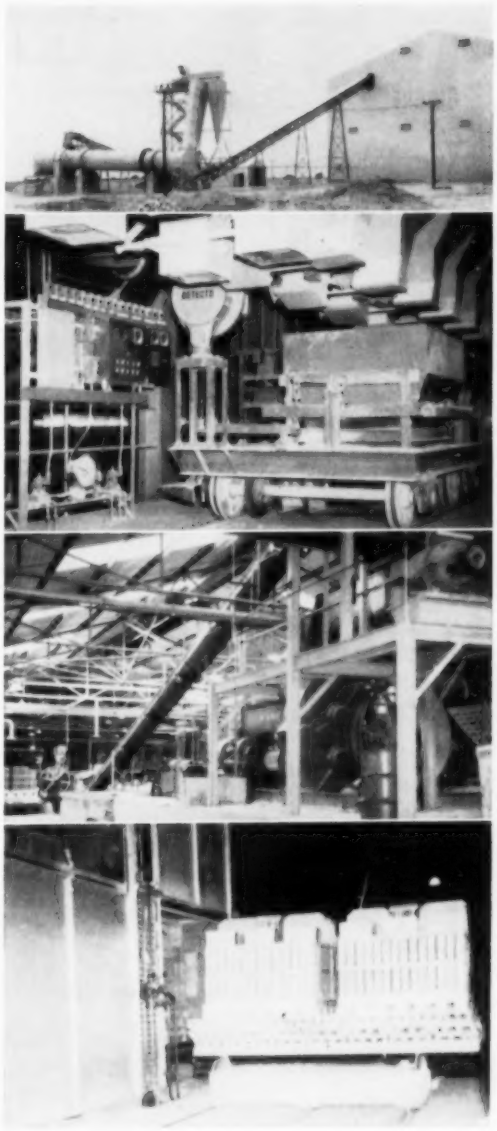
A vacuum pump, of any type, is a very closely fitted machine, and it should have the best of care, to prevent wear of the close fitting parts. The writer prefers the use of two small pumps rather than one large pump.

For example, if the problem requires pump capacity of 100 CFM, the writer would install Two 50 CFM pumps, connected into the vacuum system, even though first cost would be a little higher. There are several reasons for this illogical thought.

In the first place, the close fit of the smaller pump is little affected by expansion and contraction. The cumulative affect of expansion and contraction on a large pump affects the close fit to a larger extent, and the bearing centers, on a large pump, are further apart.

(Continued on page 72)

North American's Newest Plant Designed and Built by Hendryx



The crushing plant, rotary clay dryer, dust collectors and belt conveyor in the new North American Refractories Company plant in Farber, Missouri. The dryer is by-passed when the clay is dry.

View of a batch car under the clay bins. Crushed clays can be proportioned to the dry pan, or ground clays to presses and auger machine.

Auger machine and represses. Brick are set directly on kiln cars, or hand-molded shapes can be dried in humidity rooms before loading.

Kiln car entering Hendryx dryer, which handles both extruded and dry-pressed shapes.

North American Refractories Company's most recent plant, located in Farber, Missouri, is completely new from the receiving and processing of clay to the manufacture of brick by all processes. It was connected to the old plant without disruption of the existing usable facilities. Utilizing all the latest developments in clay processing and handling, the new plant will be an important milestone in the trend to lower cost ceramic plant operation.

Hendryx ceramic plant design keeps the accent on the kind of shortcuts that produce tangible operating cost economies — in man-hours, in power consumption, in maintenance —at the same time improving product quality.

Hendryx engineering is a complete package, comprising buildings, clay handling, crushing, mixing, drying rooms, continuous dryers, and tunnel kilns — all of the latest, most efficient design — with complete supervision of construction, assembly and installation.

It will pay you to consult with us when planning your new ceramic plant or replacement facilities.

HENDRYX
INDUSTRIAL DESIGN

DWIGHT B. HENDRYX AND ASSOCIATES
6621 Darlington Road
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Crissey Named Region 5 President

Norman H. Crissey, of the Chicago Brick Co., was elected president of Region 5—SCPI, at the 15th annual meeting held at the Sheraton Hotel in Chicago. Winfield Eckley, of the U. S. Brick Co., of Tell City, Ind., was elected vice president, and Charles Richards, of St. Louis, was renamed treasurer.

Ronald S. Ryner is executive director of Region 5 which has headquarters in Chicago, and Cliff Barletta is the Chicago field engineer. Engineering offices are maintained in St. Louis, under the supervision of Field Engineer Ted Duke.

Along the Region 5-SCPI luncheon table (left to right) Jack Clark, promotion director of National SCPI, Washington; I. R. Cline, retiring president of Region 5; Douglas L. Whitlock, chairman of the board of directors of SCPI Washington; Jerry Svec, vice president of BRICK & CLAY RECORD, and W. J. Roark, director of SCPI mason relations, Washington.

Annual meeting guest speakers included Douglas L. Whitlock, chairman of the board of National SCPI, of Washington, D. C.; Jack Clark, promotion director of SCPI Washington; and William Roark, mason relations director of National SCPI.

Paul Johnson, deputy director of SCPRF outlined latest developments in new products and new applications for brick and tile.

Ryner presented to Region 5 members the details of a complete engineering-promotional program for 1959. With special services in the non-residential construction field, the program is one of the most comprehensive ever undertaken by Region 5, largest of 18 such groups that comprise National SCPI.

Region 5 also will continue to provide material for architectural classes in colleges and universities, and again will work closely with union groups on apprentice training.

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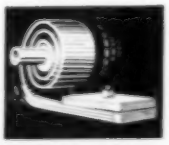

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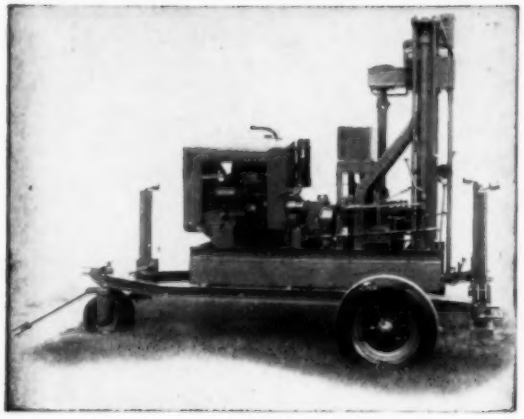

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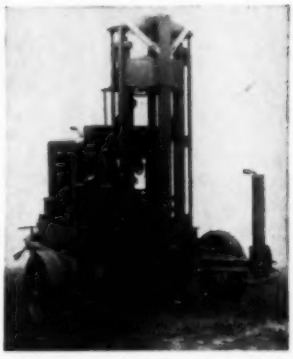

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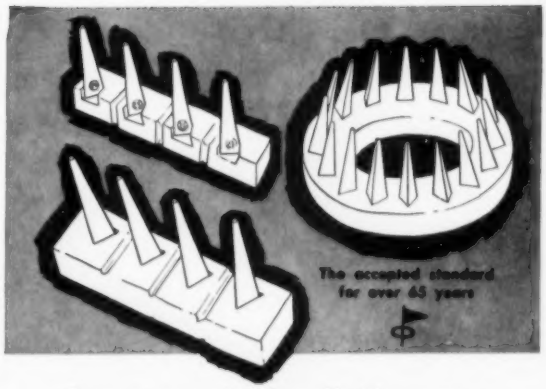

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Regardless of your firing operations, there is an Orton Cone sequence to meet your needs.

Cone Numbers 022 to 42, inclusive, (except Nos. 21, 22, 24, and 25, but including Nos. 31½ and 32½) are available in LARGE cones. SMALL cones are stocked in Nos. 022 to 12, inclusive, with numbers 12 to 20 available on special order.

LARGE cones of an iron-free compound are available in Nos. 010 to 3, inclusive, and are frequently used where reducing conditions exist in the kiln.

P.C.E. Cones are made in numbers 12 to 42, inclusive, except Nos. 21, 22, 24 and 25, but including Nos. 31½ and 32½.

Two-hole and four-hole plaques for LARGE Cones are available in two different compositions; one for temperatures through Cone 16, and the other for use through Cone 36. Four place plaques for SMALL Cones are also available in these same compositions. Steel molds for making test cones for the A S T M (P.C.E.) Test are available, but round plaques for the P.C.E. Test are not available.

A 56-page booklet, "The Properties and Uses of Pyrometric Cones", and the Foundation's Temperature Equivalent Table are available upon request.

Orton standard pyrometric Cones

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The Edward ORTON Jr. Ceramic FOUNDATION

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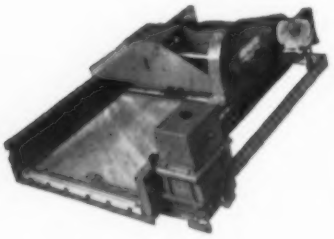

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Send for Bulletin 16-EH.

SEE OUR CATALOG IN Ceramic data book P-138, 139

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SEANOR Continued

If you use one large pump, and it goes bad, you are down until it can be repaired, or replaced. Whereas if you use two pumps each having one-half of the capacity of the large pump, and one of them goes down, most heavy clay plants can limp along pretty well with one pump until the bad pump is repaired, or replaced.

For example, one plant with two 50 CFM pumps, processed their clay at 1.23 psi, and if one of these pumps were down the other maintained a pressure of about 2.5 psi until the bad pump was replaced. While 2.5 psi was higher than they wanted they could get along for a few days at this processing pressure.

An auxiliary of pumps that are sealed and lubricated with oil is the oil-water separator. This device separates condensed water from the oil and bleeds the water off, returning the oil to the pump's reservoir. Be sure to use the oil that is recommended by the manufacturer of the pump.

The data in the pump catalog presumes that the pump will be used on a reasonably dry air ,and air that is reasonably free of dust. The specifications for a proper vacuum filter are based on this assumption. However, the air pumped out of the vacuum chamber of a brick machine contains considerable dust and also a high percentage of water-vapor.

Just how much of the pugging water is evaporated in a deairing machine is debatable and is usually based on opinions which may say that as much as 1 to 1½% is evaporated.

One Ceramic Experimental station ran tests, on one clay only, and found that about ½ of 1% of the tempering water was lost in the vacuum process.

Dust and Water Vapor

This excessive amount of dust and water vapor is a problem in the deairing process on a heavy clay plant. We are usually advised by the catalogs of pump manufacturers to locate the pump as close to the work as possible as this reduces friction which would occur in a long line of pipe.

This is not good engineering on a heavy clay products plant.

(Continued Next Month)

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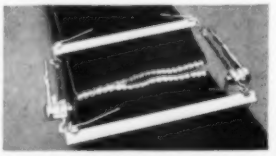

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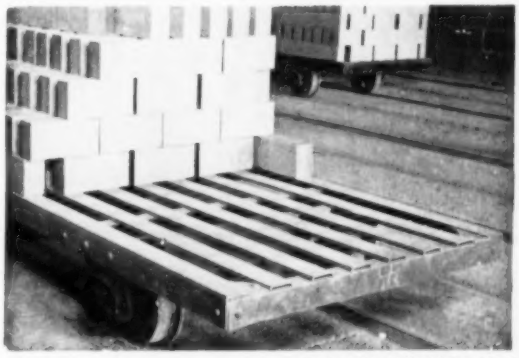

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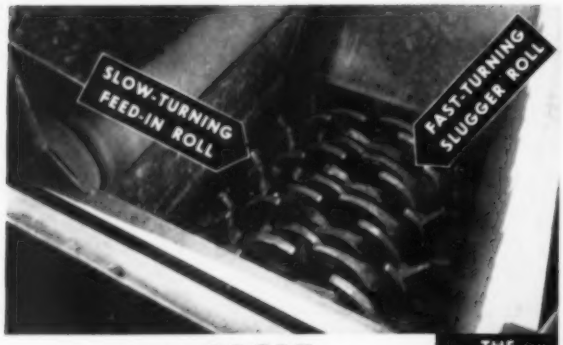

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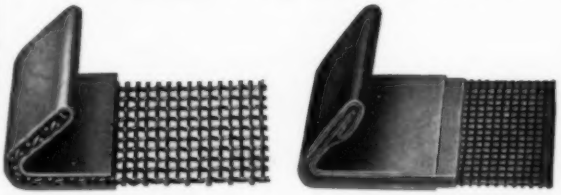

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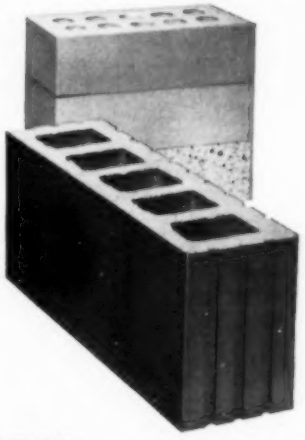

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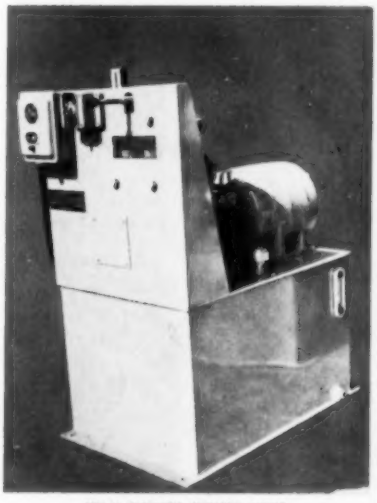

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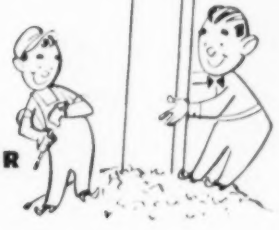
•

3 BUILD GREATER PROFITS

•

4 SPEED PRODUCTION

Hanco ELECTRIC SCREEN HEATERS



PIONEERS IN ELECTRIC SCREEN HEATING

F. R. HANNON & SONS Hanco

1605 Waynesburg Rd. S.E., Canton 7, Ohio

CLASSIFIED ADVERTISEMENTS

Limited to Want Ads, Consulting Engineers, or Used Equipment ads, (wanted or For Sale)

TRANSIENT WORD ADS: 12c per word for each insertion.

Headings such as "Wanted", "For Sale", etc. and address to be counted as part of the ad. Minimum charge $2.00 each insertion.

POSITION WANTED ADS: $1.50 for 25 words or less; each add'l word 10c.

FOR USE OF BLIND ADDRESS: (Care of BRICK & CLAY RECORD) count as 15 words to cover cost of handling and forwarding replies.

DISPLAY-BOX TYPE ADS

$15.00 per inch. On advance orders for twelve consecutive issues, 12.00 per inch per insertion. (No retroactive adjustment).

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Display classified advertisements are set and rates apply in half-inch multiples. (1 inch minimum; 5 inch maximum).

Add 25% to above rates for Reverse Plate (white lettering on black background).

All rates based on payment in advance except on regular contract.

No Agency Commission or Cash Discount

BRICK and CLAY RECORD
5 South Wabash Avenue, Chicago 3

POSITION WANTED

MANAGER OR GENERAL SUPERINTENDENT Over 30 years experience in production and marketing Face, Common Brick, and Hollow Building Tile in shale and clay. Capable of assuming full responsibility in production, sales, labor and customer relations. Experienced in both tunnel kiln and periodic kiln operation. Desire a connection where "QUALITY" is an important watchword. Address Box 2-EAX care of BRICK & CLAY RECORD.

MANAGER Structural Clay or Refractories business, 20 years experience; engineering, construction, production, and marketing—modern tunnel kiln plants. Registered Ceramic Engineer. Basic salary plus small commission for sale of top quality merchandise. All replies confidential. Address 3-SMH care of BRICK & CLAY RECORD.

FOR SALE—USED EQUIPMENT

FOR SALE

ROTARY KILNS: 11'x155', 8'x170', 8'x125', 8'x115', 8'x50', 7'6"x100', 6'x60', 4'x24'
ROTARY DRYERS: 8'8"x70', 6'x50', 4'8"x32', 4'x30', 3'x15', 2'x9'
CRUSHERS: JAW—20"x6", 18"x9"; GYRATORY, 100 HP
HAMMERMILL: Penna. Crusher NON-CLOG, 400 HP, UNUSED, 1952, #DNC-5060
PUG MILLS: 30"x14", 7"x3'6", T347 SS

PERRY EQUIPMENT CORP.
1432 N. 6th St. Phil. 22, Pa.
POplar 3-3505

FREEWAY FORCES SALES
Of All Equipment Of
Currently Operating
Brick & Tile Plant
Contact M. GJERTSEN
7856 Renton Ave., Seattle 18, Wash.
Parkway 2-3954

FOR SALE—USED EQUIPMENT

FOR SALE

One—8 ton 28 gauge Plymouth Locomotive; One—Power Winch, complete with 200' cable, drive elect. motor; One—1¼ yard Marion Gas-Elect. Shovel. One—8" and one 6" Centrifugal pump, complete with motors; One—5 HP U.S. Gear Head 56 RPM 220-440 three phase Electric Motors—from 7 to 75 HP 220-440 three phase.
Above items all in excellent condition

THE STILES & REYNOLDS BRICK CO.
P.O. Box 264 Branford, Connecticut

CRUSHERS—JAW—9 x 16—13 x 24—36 x 10—15 x 30—24 x 36—36 x 48

SCREENS—3 x 10—4 x 10 Tyler Hummer—42" x 10' Cedar Rapids—60" x 12' Robins—60" x 12' Deister (Plate)

PUG MILLS—9' Freese—9' Chambers—12' Bonnot—10' American (2 shaft)—15' Chambers granulator

DRY PANS—7' American—9' Bonnot (heavy)—9' Chambers (pneumatic muller suspension)

DRY PRESS—4 Mold Boyd w/drive

BRICK MACHINES—#233 American—#30 Steele de-air.—Bonnot De-Air w/18" auger

CUTTERS—#18 Steele Automatic 10" & 14"—Bonnot drainttile

SEWER PIPE PRESS—Pearne & Lacey Vertical w/dies, like new, w/hydraulic system

LAWLER COMPANY
Metuchen, N. J. Liberty 9-0245

Two, 105-FB St. Regis, single tube bag packers, excellent condition, specially hardened parts, for bagging cement, clay, grog, sand, rock aggregates etc. Priced right. Write Box 3-NVV care of BRICK & CLAY RECORD.

FOR SALE

DRYER CARS—Single deck, 24" and 25" gauge.
DRY PANS—Clearfield 8½', 9' rebuilt.
BRICK MACHINES—Steele 30, Fate St., Steele 40
CUTTERS—Steele 18B right hand.
FEEDERS—Bonnot 60" disc, 30" x 10' Apron Feeder with Hopper.
PUG MILLS—Bonnot 12' single shaft.
CRUSHER—McLanahan 18" x 24" single roll.
REPRESS—Bonnot 2 mold, rebuilt.
ELEVATOR—42' C. Malleable buckets 16" x 6" x 12" series 800 bushel chain. SKF Bearings.
New, Used and Rebuilt Equipment for Brick & Clay Products Industry.

HERMAN A. HALL
Wyomissing, Pa. FR 24310

FOR SALE

650 Chase 25 in. gauge dryer cars
3600 ft. of bulb angle rail suitable for tunnel kiln operation.
2 Farrar & Trefts boilers 200 H.P. with gas and oil burners.
1 Steam engine 400 H.P. Hamilton Corliss
3 Gasoline locomotives
1 Chambers Pug Mill
1 Chambers Granulator
1 Chambers Royal Brick Machine
1 Hyster 75 with 14 ft. lift
1 Clark 6025 with 14 ft. lift
Pulleys of various sizes, faces and bores
2 Priester Brick Forks
40 Hauck gas Burners with Pipe
1 Marion #331 shovel with ¾ yd. bucket
125 ft. of 36 in. triple leather belting

ALEXANDER BURKE'S SONS
Cicero Ave., & 39th St., Circero, Ill.

FOR SALE—USED EQUIPMENT

BRICK MACHINES: (dewired) FRH jr. & Sr. Intl. Vac-Air Chemist, Steele #40, Amer. 290, 404A. Bonnot 497, 22. Greyhound
⅝ to 3 yd. DRAG SCRAPERS. Loaders.
MIXERS: #2 & #3 Simpson. 7' Lehmann. Boyd 4 molds, Gates 2 mold DRY PRESSES. 9' Dry Pans. 8' Wet Pan.
MILLS: 4½ x 16" 6 x 15 Ball. 5 x 22, 6 x 22 Tube. 5 x 9 Rod. 10', 12' & 14' PUG. 8 x 124, 8 x 170 & 8 x 9 x 100' KILNS
DRYERS: 4 x 20, 4½ x 35, 5 x 40, 6 x 50, 8 x 70
CUTTERS: Steele #18, Chambers 22.
CRUSHERS: 24 x 10, 12 x 18, 32 x 18 Roll. Brewer 1822 conical, 1836, 2036, 2436, 4042 JAW Conveyors, Vib. Screens, Shovels, Draglines.

MID-CONTINENT EQUIPMENT CO., INC.
8321 Gannon Ave., Wydown 1-2826 St. Louis 24, Mo.

WALTER C. STOLL & SONS
New and Used
CLAY WORKING MACHINERY
5028 Alhambra Ave., Los Angeles 32, Calif.
CApitol 2-1141

FOR SALE

BRICK MACHINES—Combination & Deairing
PUG MILLS—Single & Double Shaft
GRANULATORS—Chambers 51 & Freese 16
CUTTERS—Steele 18, Freese & Hand
DRY PRESS—Boyd 4 mould Special
DRY PANS—4', 7', 9'
HAMMER MILLS—6"x8" to 36"x42"
SMOOTH ROLLS—16x30, 30x36
DISINTEGRATERS—12", 18" & 24"
JAW CRUSHERS—9x16, 24x13, 18x24, 48x60
SINGLE ROLL CRUSHER—30" x 30"
ROTARY DRYERS & KILNS—2x20, 3x30, 6x40, 7'x80'
STEELE #30 DEAIRING MACHINE, BONNOT SPECIAL HEAVY DUTY
HAND TILE PRESS
MIXERS—Lancaster EAG 3 & 4, Clearfield #610, Simpson #3, Blystone
SCREENS—Hummer 3x5, 3x10, 4x10 Cedar Rapids 3½ x 10
REPRESS—Bonnot 2-mould
FEEDERS—Disc Apron, Reciprocating. Even
HARDINGE CONICAL MILLS—3', 7', 10'
PEBBLE MILLS—Various Sizes

List your spare equipment with us.

ROBERT L. CLARE
212 Rector St. Perth Amboy, N. J.
Phone Hillcrest 2-0061

Air Compressors: 676, 1500 & 2200'
Side Dump Cars: 120—1½ 2, 3 and 12 Yards
Gasoline Locomotives: 4, 6, 8 and 14 tons
Diesel Locomotives: 6, 10, 25, 45, 65 and 80 tons
Smooth Roll Crushers: J. C. Steele 12" and 18"
Automatic Cutter: Freese Model C-25
Rotary Dryers & Kilns: 4'x20', 5'x30',5'6"x50', 7'80"x60', 6'x120', 7'x180' 8'x125', 6—10'x150'
WANTED—Air Compressors—Dryers—Locomotives

R. C. STANHOPE, INC.
603 42nd St. New York 17, N. Y.

RAILS AND DRYER CARS

100 Single Deck
100 Mud Brick Rack Cars
50 Double Deck Cars

All sections rails and track supplies. New Wood Pallets made to your specifications.

M. K. FRANK
401 Park Bldg. Pittsburgh 22, Pa.
480 Lexington Ave. New York 17, N. Y.
105 Lake Street Reno, Nevada
1209 Metropolitan Bank Bldg. Miami 32, Florida

FOR SALE—USED EQUIPMENT

Forrest A. Paschal
Phone Sherwood 2-2749 & 2-2500
P. O. Box 289 Siler City, N.C.

FOR SALE: 1 used American rim discharge grinder and 2 used Leahy Model "D" screens.

FALL BARGAINS

DE-AIRING MACHINES, #30 JC Steele, FRH #6WJ6, Bonnot Combination, Chambers #9C, American 404-A, International #470, International Falcon.

CUTTER, Steele #18, Model BLH, Freese C-25, and C-20.

ROLLS, Disintegrating, Steele 24 x 24, 12 x 24, smooth roll 18 x 24.

DRY PAN, 9' Stevens, 9' Bonnot.

SCREENS, Tyler Hummer, Cedar Rapids, Sturtevant.

DRYERS, Rotary. Various sizes from 2x30 to 8 x 175.

FERNHOLTZ MACHINERY CO.
8468 B Melrose Place
Los Angeles 46, California

FOR SALE

PULLEYS of various sizes, face and bores.
ELECTRIC MOTORS, various H.P. and speeds.
BREWER Heavy Duty Conical Roll Crusher.
STEELE No. 5 Hoisting Drum for pulling up cars.
KILN COOLING FANS, 48 and 24", Motor Driven Propellers.
CLAY STORAGE SHED, Steel Frame, 50' x 100'.
200' Clay Storage Shed Conveyor, 20", motor driven.

GRANT BRICK WORKS
Weldon, N. C.

WANTED—USED EQUIPMENT

WANTED: 8 Ton Locomotive, 36" Gauge, Diesel preferred. Richland Shale Products Co. Box 4126, Columbia, S. C.

WANTED

Used, 18" x 24" or 18" x 30" Pioneer, single roll, toothed crusher. Write Box 3-JKM care of BRICK & CLAY RECORD.

FOR SALE—PLANT

BRICK PLANT, capacity approximately 8 million standard size brick equivalents per year; 91 acres, with 1,600 million cubic yards of unmined clay (dark red burning) sufficient to produce 800 million standard size brick. Near Ohio River town with abundance of labor. Also will subdivide as industrial sites. Write Brick Plant, 415 Gem City Savings Building, Dayton 2, Ohio.

Inquiries invited for plant now available in Northwestern Ohio for brick or drain-tile, with 75 foot Allied tunnel kiln and four periodic kilns—Bedford shale, Write Box 3-EAK, care of BRICK & CLAY RECORD.

FOR SALE—PLANT

FOR SALE—BRICK plant, in operating condition in New Mexico. Best shale deposit in state. Owner wishes to retire. Address Box 11-QBH, care of BRICK & CLAY RECORD. 11-4

WANTED—HELP

WANTED

Brick plant Superintendent with Ceramic Engineering experience. New project in Australia incorporating tunnel kiln burning of face bricks.

Attractive opportunity for capable executive in a rapidly expanding Country.

Generous salary and conditions commensurate with experience. Reply in first instance and in confidence, giving details of qualifications, experience, etc. to Box 3-SCA care of BRICK & CLAY RECORD.

CERAMIC ENGINEER with three to five years experience for Quality Control Supervisor, staff position in connection with manufacturers of insulating firebrick and refractories. Responsible position with good opportunities in Western Pennsylvania plant of large multiplant company. Please submit resume to Box 3-NAA in care of BRICK & CLAY RECORD.

MISCELLANEOUS

THE BRITISH CLAYWORKER
(Established 1892)

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Up-to-date articles and information on all phases of the Brick & Tile industry

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FOR SALE—BUFF BURNING FIRE CLAY, lump or ground. Ask for prices at mine or delivered via truck or railway. Booz & Co., Macomb, Illinois.

MISCELLANEOUS

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Complete Plant Design
For
Brick, Tile, Pipe, Refr.
Investigations — Reports
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Car Tunnel Kilns—Dryers
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Notice . . . . Have extra fine-grinding capacity and will custom grind ores such as Iron, Manganese, Chrome, Zirconium, etc., to buyer's specifications. Prefer inquiries for carload shipments. Union Mining Co., 2306 First Nat'l Bank Bldg., Pittsburgh 22, Pa.

Sell Your Used Equipment in the Classified Columns It Pays to Advertise in BRICK & CLAY RECORD

"Sticky" Clay?

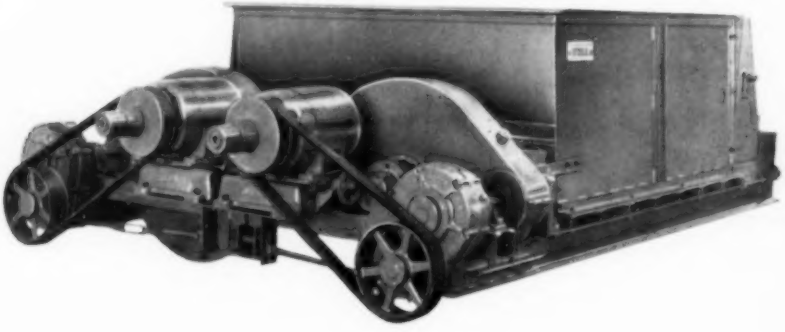
The machine illustrated is the Steele DOUBLE No. 88C Even Clay Feeder. It is designed for very high capacities or for clays that have an unusual tendency to bridge over in a hopper. The interior of the hopper measures 7'-0" in length and 7'-0" in width just above the eight spiral shafts. Sides may be sloped outward at 70 degrees for maximum capacity, straight up for even less likelihood of bridging, or sloped slightly inward (as in the photograph) for use with extremely difficult and sticky clays.

The gate, which can be moved upward and downward, will allow adjustment of clay feed from approximately 40T/hr to 80T/hr (or from 60T to 120T) at one fixed speed of the spiral shafts. With the Reeves Vari-Speed Drives as on this particular Feeder, the feed-variation can be from 40T/hr to 120T/hr.

Basic hopper capacity is approximately 5 cu. yds., but hopper can be extended almost any height provided the weight of the extended hopper is independently supported.

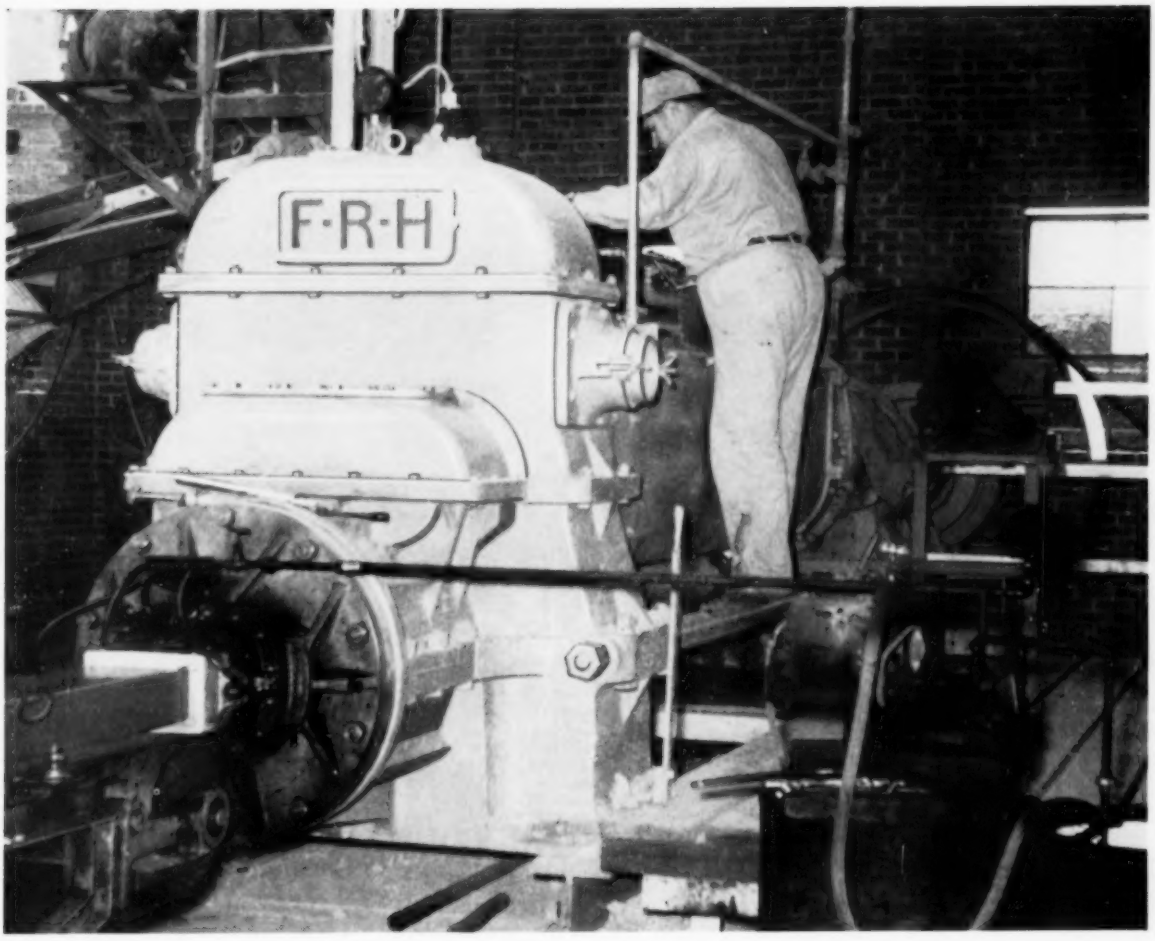
Full information on request.

Pacific Agents:
Walter C. Stoll,
5028 Alhambra Ave.,
Los Angeles 32, Calif.



J. C. Steele & SONS Statesville, N. C.

• The Best in Clay Machinery Since 1889 •



Fate-Root-Heath Machines Produce

66,000,000 BRICKS PER YEAR

For Marion Brick Corporation, Marion, Ohio

Top quality brick and clay products require close quality control from start to finish. For Marion Brick Corp., Marion, Ohio, F-R-H de-airing extrusion machines provide this important element.

Machine pictured exerts nearly half a million pounds of pressure per sq. in., produces extra hard, extra uniform columns of clay. *Quality extrusions every time* help the company maintain production schedules, make deliveries on time.

Ceramic machinery problem? Contact The Fate-Root-Heath Company, Dept. B-1, Plymouth, Ohio.

For 100% operating efficiency—order genuine F-R-H replacement parts directly from the factory

F·R·H Ceramic Machinery

CUTS UP TO 18,000 BRICKS PER HOUR

Big volume cutting with precision accuracy . . . these words best describe the "American" No. 858 Automatic Electric Cutter. This unit will cut brick or tile up to 14"x14". The electric control makes each cut perfect . . . there is no chance for error.

The "American" Automatic Electric Cutter has an hourly capacity of from 3,000 to 18,000 bricks . . . 23 standard bricks per cut. This unit is particularly suited for plants specializing in the production of "SCR" brick.

The "American" No. 858 is a complete unit . . . there are no extras to buy. Wire holders and platens are adjusted easily for any size requirement, and the base adjusts up or down to suit any cross section of clay.

Other features of the "American" No. 858 Automatic Electric Cutter include: magnetic clay bar clamp for perfect cut . . . hinged measuring frame can be lifted to permit die or front change . . . there are no valves or gears . . . anti-friction bearings are used throughout.

The "American" No. 858 Cutter can add to the production efficiencies of your plant. Before you buy check "American" . . . specified as first choice by clay production men.

American CLAY MACHINERY

A Division of HUBER-WARCO COMPANY
Marion, Ohio, U.S.A.

Plants in Marion and Bucyrus, Ohio
Cable Address: HUBARCO

OVER A CENTURY OF EXPERIENCE IN THE MANUFACTURE OF CLAY MACHINERY